TRACEMASTERVUE ECG MANAGEM SYSTEM

DATABASE AND XML SCHEMA (1.03, 1.04, 1.04.XX) DATA DICTIONARY

PHILIPS

Notice

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Applicable to TraceMasterVue version C.01 and later.

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TABLE OF CONTENTS

OVERVIEW

The purpose of this data dictionary is essentially to provide you with the necessary information to be able to generate your own custom reports related to ECGs in the database.

WARNING

You may not alter the contents of the database, that is, do not perform any Write operations on data stored in the database. Doing so will corrupt existing data. In addition, it will void any Philips warranty support for the product.

NOTE The XML 1.04.01 schema provides partial support for the ECGs sourced on a cardiograph using the new Philips 12-lead algorithm (with support for 15/16 leads).

DBEMS TABLE DEFINITIONS

dbEMS is the main database for all patient data records, including auditing, demographics, ECGs, and the like.

Philips XML ECG are stored in [tblECGMain] and its subordinate tables – [tblECGWaveforms], [tblECGStmtsCoded] and [tblECGStmtsUncoded].

Other data types, including Holter reports and Stress reports, are stored in [tblClinicalReport] as binary blobs or in disk files referenced from [tblClinicalReport].

[tblProcedure] has been added to:

- Provide a common node for all procedures
- Speed searches for all procedure types, by containing common search parameters – date acquired and location (in a more efficient denormalized form with separate columns for institution, facility and department).
- Provide columns for the procedure based name components (as opposed to the "official", most recently entered, name components contained in [tblPatients]) that can be queried when the user requests a "name-alias" patient search.

Table 1.   dbEMS: tblAuditTracking

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblAuditTracking	1	auditTrackingId	uniqueidentifier	16	no	Uniquely identifies specific AT entries
tblAuditTracking	2	logDate	datetime	8	no	Date log entered
tblAuditTracking	3	userId	nvarchar	510	no	User of performing action for log entry
tblAuditTracking	4	patientNum	nvarchar	80	yes	Associated patient ID, if applicable
tblAuditTracking	5	dateAcquired	datetime	8	yes	Associated ECG date, if applicable
tblAuditTracking	6	ecgInstitution	nvarchar	100	yes	ECG institution, if applicable
tblAuditTracking	7	ecgFacility	nvarchar	100	yes	ECG facility, if applicable
tblAuditTracking	8	ecgDepartment	nvarchar	100	yes	ECG department, if applicable
tblAuditTracking	9	eventId	tinyint	1	no	Event ID (see the Field Enumerations tables on page 47)
tblAuditTracking	10	eventType	tinyint	1	no	Event type (see the Field Enumerations tables on page 47)
tblAuditTracking	11	statusCode	int	4	no	Status code (see the Field Enumerations tables on page 47)
tblAuditTracking	12	logType	tinyint	1	no	Log type (see the Field Enumerations tables on page 47)
tblAuditTracking	13	newState	tinyint	1	yes	New ECG state, if applicable (see the Field Enumerations tables on page 47)
tblAuditTracking	14	inboxId	nvarchar	100	yes	Clinician inbox ID, if applicable
tblAuditTracking	15	ecgSections	smallint	2	yes	ECG sections that were affected. For details, see page 51.
tblAuditTracking	16	eventDetails	nvarchar	510	yes	Details outlining the event being logged

Table 1. dbEMS: tblAuditTracking						
Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblAuditTracking	17	logText	ntext	16	yes	Log text
tblAuditTracking	18	ecgReason	nvarchar	510	yes	Reason text

Table 2.   dbEMS: tblAuditTrackingArchive

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblAuditTrackingArchive	1	auditTrackingId	uniqueidentifier	16	no	Uniquely identifies specific AT entries
tblAuditTrackingArchive	2	logDate	datetime	8	no	Date log entered
tblAuditTrackingArchive	3	userId	nvarchar	510	no	User of performing action for log entry
tblAuditTrackingArchive	4	patientNum	nvarchar	80	yes	Associated patient ID, if applicable
tblAuditTrackingArchive	5	dateAcquired	datetime	8	yes	ECG institution, if applicable
tblAuditTrackingArchive	6	ecgInstitution	nvarchar	100	yes	ECG institution, if applicable
tblAuditTrackingArchive	7	ecgFacility	nvarchar	100	yes	ECG facility, if applicable
tblAuditTrackingArchive	8	ecgDepartment	nvarchar	100	yes	ECG department, if applicable
tblAuditTrackingArchive	9	eventId	tinyint	1	no	Event ID (see the Field Enumerations tables on page 47)
tblAuditTrackingArchive	10	eventType	tinyint	1	no	Event type (see the Field Enumerations tables on page 47)
tblAuditTrackingArchive	11	statusCode	int	4	no	Status code (see the Field Enumerations tables on page 47)
tblAuditTrackingArchive	12	logType	tinyint	1	no	Log type (see the Field Enumerations tables on page 47)
tblAuditTrackingArchive	13	newState	tinyint	1	yes	New ECG state, if applicable (see the Field Enumerations tables on page 47)
tblAuditTrackingArchive	14	inboxId	nvarchar	100	yes	Clinician inbox ID, if applicable
tblAuditTrackingArchive	15	ecgSections	smallint	2	yes	ECG sections that were affected. For details, see page 51.
tblAuditTrackingArchive	16	eventDetails	nvarchar	510	yes	Details outlining the event being logged
tblAuditTrackingArchive	17	logText	ntext	16	yes	Log text
tblAuditTrackingArchive	18	ecgReason	nvarchar	510	yes	Reason text

Table 3.   dbEMS: tblECGMain

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblECGMain	1	ecgId	uniqueidentifier	16	no	GUID uniquely identifying an ECG
tblECGMain	2	locationId	uniqueidentifier	16	no	Unique location identifier GUID
tblECGMain	3	patientId	uniqueidentifier	16	no	GUID uniquely identifying a patient
tblECGMain	4	dateOfBirth	datetime	8	yes	Date of birth
tblECGMain	5	age	float	8	yes	Age
tblECGMain	6	ageUnits	tinyint	1	yes	Age units (see the Field Enumerations tables on page 47)
tblECGMain	7	height	float	8	yes	Height
tblECGMain	8	heightUnits	tinyint	1	yes	Height units (see the Field Enumerations tables on page 47)
tblECGMain	9	weight	float	8	yes	Weight
tblECGMain	10	weightUnits	tinyint	1	yes	Weight units (see the Field Enumerations tables on page 47)
tblECGMain	11	sex	tinyint	1	yes	Gender
tblECGMain	12	dateAcquired	datetime	8	no	Date ECG is taken at the cart; local time
tblECGMain	13	dateReceived	datetime	8	no	Date ECG arrives at the server; GMT time
tblECGMain	14	dateModified	datetime	8	yes	Date ECG last modified on the server; GMT time
tblECGMain	15	dateConfirmed	datetime	8	yes	Date ECG confirmed at the server; GMT time
tblECGMain	16	inboxId	uniqueidentifier	16	yes	GUID uniquely identifying a clinician inbox
tblECGMain	17	typeId	smallint	2	yes	Type ID
tblECGMain	18	sourceId	smallint	2	yes	Acquisition machine identifier (see the Field Enumerations tables on page 47)
tblECGMain	19	severityId	smallint	2	yes	Severity ID (see the Field Enumerations tables on page 47)
tblECGMain	20	statFlag	bit	1	yes	Stat indicator
tblECGMain	21	state	tinyint	1	no	Current disposition of an ECG (see the Field Enumerations tables on page 47)
tblECGMain	22	requestingMD	nvarchar	128	yes	Requesting clinician
tblECGMain	23	mdSignature	nvarchar	512	yes	Clinician signature
tblECGMain	24	confirmingUserId	nvarchar	128	yes	Who confirmed an ECG
tblECGMain	25	operatorId	nvarchar	64	yes	Who took the ECG
tblECGMain	26	criteriaVersion	varchar	8	yes	Analysis criteria version
tblECGMain	27	measurementVersion	varchar	8	yes	Analysis measurement version
tblECGMain	28	heartRate	smallint	2	yes	Heart rate at time of ECG acquisition

Table 3.   dbEMS: tblECGMain

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblECGMain	29	prInterval	smallint	2	yes	PR interval
tblECGMain	30	qrsDuration	smallint	2	yes	QRS duration
tblECGMain	31	qtInterval	smallint	2	yes	QT interval
tblECGMain	32	qtcb	smallint	2	yes	QTCB
tblECGMain	33	pFrontAxis	smallint	2	yes	P front axis
tblECGMain	34	i40FrontAxis	smallint	2	yes	i40 front axis
tblECGMain	35	t40FrontAxis	smallint	2	yes	T40 front axis
tblECGMain	36	qrsFrontAxis	smallint	2	yes	QRS front axis
tblECGMain	37	stFrontAxis	smallint	2	yes	ST front axis
tblECGMain	38	tFrontAxis	smallint	2	yes	T front axis
tblECGMain	39	pHorizAxis	smallint	2	yes	P horizontal axis
tblECGMain	40	i40HorizAxis	smallint	2	yes	I40 horizontal axis
tblECGMain	41	t40HorizAxis	smallint	2	yes	T40 horizontal axis
tblECGMain	42	qrsHorizAxis	smallint	2	yes	QRS horizontal axis
tblECGMain	43	stHorizAxis	smallint	2	yes	ST horizontal axis
tblECGMain	44	tHorizAxis	smallint	2	yes	T horizontal axis
tblECGMain	45	comparisonEcgId	uniqueidentifier	16	yes	ECG Id of compared ECG
tblECGMain	46	headerInfo	varbinary	4000	no	Binary header XML info (see the Philips XML schemas)
tblECGMain	47	userDefines	varbinary	4000	yes	Binary user defines XML info (see the Philips XML schemas)
tblECGMain	48	orderInfo	varbinary	4000	yes	Binary order info XML info (see the Philips XML schemas)
tblECGMain	49	documentInfo	varbinary	4000	no	Binary document XML info (see the Philips XML schemas)
tblECGMain	50	reportInfo	varbinary	4000	no	Binary report XML info (see the Philips XML schemas)
tblECGMain	51	acquisitionInfo	varbinary	4000	no	Binary acquisition XML info (see the Philips XML schemas)
tblECGMain	52	patientInfo	varbinary	4000	no	Binary patient XML info (see the Philips XML schemas)
tblECGMain	53	interpretationInfo	varbinary	4000	yes	Binary interpretation XML info (see the Philips XML schemas)
tblECGMain	54	ecgTimestamp	timestamp	8	no	ECG timestamp of last modification
tblECGMain	55	userField1	nvarchar	64	yes	User field 1 label text
tblECGMain	56	userField2	nvarchar	64	yes	User field 2 label text
tblECGMain	57	userField3	nvarchar	64	yes	User field 3 label text
tblECGMain	58	userField4	nvarchar	64	yes	User field 4 label text
tblECGMain	59	userField5	nvarchar	64	yes	User field 5 label text

Table 3.   dbEMS: tblECGMain

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblECGMain	60	userField6	nvarchar	64	yes	User field 6 label text
tblECGMain	61	userField7	nvarchar	64	yes	User field 7 label text
tblECGMain	62	userField8	nvarchar	64	yes	User field 8 label text
tblECGMain	63	rrInterval	smallint	2	yes	RR interval
tblECGMain	64	pDuration	smallint	2	yes	P duration
tblECGMain	65	qOnset	smallint	2	yes	Q onset
tblECGMain	66	tOnset	smallint	2	yes	T onset
tblECGMain	67	qtcf	smallint	2	yes	Qtcf
tblECGMain	68	qtco	smallint	2	yes	Qtco
tblECGMain	69	tOffsetStabilityRank	smallint	2	yes	T offset stability rank
tblECGMain	70	ecgFlags	int	4	no	ECG flags
tblECGMain	71	uniqueOrderId	bigint	8	yes	Unique order ID
tblECGMain	72	orderNumber	varchar	50	yes	Order number
tblECGMain	73	dateOrderRequested	datetime	8	yes	Date order requested
tblECGMain	74	dateOrderReconciled	datetime	8	yes	Date order reconciled

Table 4.   dbEMS: tblECGStmtsCoded

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblECGStmtsCoded	1	ecgId	uniqueidentifier	16	no	ID matching ECG in tblECGMain
tblECGStmtsCoded	2	sequenceNum	tinyint	1	no	Sequence number
tblECGStmtsCoded	3	statementType	tinyint	1	no	Statement type
tblECGStmtsCoded	4	libraryNum	smallint	2	no	Library number
tblECGStmtsCoded	5	statementInserted	bit	1	yes	Statement inserted indicator
tblECGStmtsCoded	6	statementModified	bit	1	yes	Statement modified indicator
tblECGStmtsCoded	7	statementDeleted	bit	1	yes	Statement deleted indicator
tblECGStmtsCoded	8	scModifierId	tinyint	1	yes	SC modifier ID
tblECGStmtsCoded	9	modifier1Id	tinyint	1	yes	Modifier1 ID
tblECGStmtsCoded	10	modifier2Id	tinyint	1	yes	Modifier2 ID
tblECGStmtsCoded	11	modifier3Id	tinyint	1	yes	Modifier3 ID
tblECGStmtsCoded	12	variable1Type	smallint	2	yes	Variable 1 type
tblECGStmtsCoded	14	variable1Value	float	8	yes	Variable 1 value
tblECGStmtsCoded	15	variable2Type	smallint	2	yes	Variable 2 type
tblECGStmtsCoded	17	variable2Value	float	8	yes	Variable 2 value
tblECGStmtsCoded	18	variable3Type	smallint	2	yes	Variable 3 type
tblECGStmtsCoded	20	variable3Value	float	8	yes	Variable 3 value
tblECGStmtsCoded	21	variable4Type	smallint	2	yes	Variable 4 type
tblECGStmtsCoded	22	variable4Value	float	8	yes	Variable 4 value

Table 5.   dbEMS: tblECGStmtsUncoded

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblECGStmtsUncoded	1	ecgId	uniqueidentifier	16	no	ID matching ECG in tblECGMain
tblECGStmtsUncoded	2	sequenceNum	smallint	2	no	Sequence number
tblECGStmtsUncoded	3	statementType	tinyint	1	no	Statement type
tblECGStmtsUncoded	4	statementText	nvarchar	256	no	Statement in plain text

Table 6.   dbEMS: tblECGWaveforms

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblECGWaveforms	1	ecgId	uniqueidentifier	16	no	ID matching ECG in tblECGMain
tblECGWaveforms	2	waveformInfo	image	16	yes	Waveform compressed image
tblECGWaveforms	3	measurementInfo	varbinary	8000	yes	Measurement info

Table 7.   dbEMS: tblLog

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblLog	1	Id	int	4	no	Log ID
tblLog	2	DateCreated	datetime	8	no	Date log created
tblLog	3	ErrorCode	int	4	no	Error code
tblLog	4	Level	varchar	50	no	Level
tblLog	5	Category	int	4	no	Category
tblLog	6	Source	varchar	4000	no	Source
tblLog	7	Message	ntext	16	no	Message
tblLog	8	Exception	varchar	2000	yes	Exception text
tblLog	9	StackTrace	varchar	4000	yes	Available stack trace
tblLog	10	UserId	varchar	100	yes	User ID

Table 8.   dbEMS: tblPatients

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblPatients	1	patientId	uniqueidentifier	16	no	Identifies a specific patient, which can map to one or more ECGs
tblPatients	2	institutionId	uniqueidentifier	16	yes	Institution associated with patient
tblPatients	3	facilityId	uniqueidentifier	16	yes	Facility associated with patient
tblPatients	4	patientNum	nvarchar	80	no	Actual patient number, used for searching
tblPatients	5	nameLast	nvarchar	80	yes	Patient last name
tblPatients	6	nameFirst	nvarchar	80	yes	Patient first name
tblPatients	7	nameMiddle	nvarchar	80	yes	Patient middle name
tblPatients	8	dateOfBirth	datetime	8	yes	Patient date of birth
tblPatients	9	dateModified	datetime	8	yes	Date table last modified
tblPatients	10	age	float	8	yes	Patient age
tblPatients	11	ageUnits	tinyint	1	yes	Patient age units (see the Field Enumerations tables on page 47)
tblPatients	12	raceId	int	4	yes	Patient race ID
tblPatients	13	sex	smallint	2	yes	Patient gender
tblPatients	14	height	float	8	yes	Patient height
tblPatients	15	heightUnits	tinyint	1	yes	Patient height units (see the Field Enumerations tables on page 47)
tblPatients	16	weight	float	8	yes	Patient weight
tblPatients	17	weightUnits	tinyint	1	yes	Patient weight units (see the Field Enumerations tables on page 47)

Table 9. dbEMS: tblProcedure

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblProcedure	1	patientId	uniqueidentifier	16	no	Identifies a specific patient, which can map to one or more ECGs
tblProcedure	2	institutionId	uniqueidentifier	16	yes	Institution associated with patient
tblProcedure	3	facilityId	uniqueidentifier	16	yes	Facility associated with patient
tblProcedure	4	patientNum	nvarchar	80	no	Actual patient number, used for searching
tblProcedure	5	nameLast	nvarchar	80	yes	Patient last name
tblProcedure	6	nameFirst	nvarchar	80	yes	Patient first name
tblProcedure	7	nameMiddle	nvarchar	80	yes	Patient middle name
tblProcedure	8	dateOfBirth	datetime	8	yes	Patient date of birth
tblProcedure	9	dateModified	datetime	8	yes	Date table last modified
tblProcedure	10	age	float	8	yes	Patient age
tblProcedure	11	ageUnits	tinyint	1	yes	Patient age units (see the Field Enumerations tables on page 47)
tblProcedure	12	raceId	int	4	yes	Patient race ID
tblProcedure	13	sex	smallint	2	yes	Patient gender
tblProcedure	14	height	float	8	yes	Patient height
tblProcedure	15	heightUnits	tinyint	1	yes	Patient height units (see the Field Enumerations tables on page 47)
tblProcedure	16	weight	float	8	yes	Patient weight
tblProcedure	17	weightUnits	tinyint	1	yes	Patient weight units (see the Field Enumerations tables on page 47)

Table 10.   dbEMS: tblClinicalReport

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblClinicalReport	1	patientId	uniqueidentifier	16	no	Identifies a specific patient, which can map to one or more ECGs
tblClinicalReport	2	institutionId	uniqueidentifier	16	yes	Institution associated with patient
tblClinicalReport	3	facilityId	uniqueidentifier	16	yes	Facility associated with patient
tblClinicalReport	4	patientNum	nvarchar	80	no	Actual patient number, used for searching
tblClinicalReport	5	nameLast	nvarchar	80	yes	Patient last name
tblClinicalReport	6	nameFirst	nvarchar	80	yes	Patient first name
tblClinicalReport	7	nameMiddle	nvarchar	80	yes	Patient middle name
tblClinicalReport	8	dateOfBirth	datetime	8	yes	Patient date of birth
tblClinicalReport	9	dateModified	datetime	8	yes	Date table last modified
tblClinicalReport	10	age	float	8	yes	Patient age
tblClinicalReport	11	ageUnits	tinyint	1	yes	Patient age units (see the Field Enumerations tables on page 47)
tblClinicalReport	12	raceId	int	4	yes	Patient race ID
tblClinicalReport	13	sex	smallint	2	yes	Patient gender
tblClinicalReport	14	height	float	8	yes	Patient height
tblClinicalReport	15	heightUnits	tinyint	1	yes	Patient height units (see the Field Enumerations tables on page 47)
tblClinicalReport	16	weight	float	8	yes	Patient weight
tblClinicalReport	17	weightUnits	tinyint	1	yes	Patient weight units (see the Field Enumerations tables on page 47)

DBEMSCONFIG TABLE DEFINITIONS

dbEMSConfig is the main database for all TraceMasterVue configuration information, including assignment rules, audit and tracking, import/export, locations, and the like.

Table 1.   dbEMSConfig: tblAssignmentRules

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblAssignmentRules	1	ES_ID	uniqueidentifier	16	no	Unique identifier for assignment rule
tblAssignmentRules	2	inboxId	uniqueidentifier	16	no	Unique identifier for inbox

Table 2.   dbEMSConfig: tblAuditTrackingConfig

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblAuditTrackingConfig	1	ID	uniqueidentifier	16	no	Unique identifier
tblAuditTrackingConfig	3	Settings	int	4	no	Settings

Table 3.   dbEMSConfig: tblConfig_IOPS

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblConfig_IOPS	1	C_ID	uniqueidentifier	16	no	Unique ID
tblConfig_IOPS	2	ProcessCat	nvarchar	40	no	Process Cat
tblConfig_IOPS	3	ProcessName	nvarchar	60	no	Process name
tblConfig_IOPS	4	ProcessType	int	4	no	Process type (see the Field Enumerations tables on page 47)
tblConfig_IOPS	5	ProcessForm	int	4	yes	Process form (see the Field Enumerations tables on page 47)
tblConfig_IOPS	6	LegacySerial	bit	1	yes	Legacy device indicator
tblConfig_IOPS	7	ProcessDescription	nvarchar	160	yes	Process description
tblConfig_IOPS	8	NumberThreads	tinyint	1	no	Thread count
tblConfig_IOPS	9	Transactions	tinyint	1	no	Transaction count
tblConfig_IOPS	10	InputDirectory	nvarchar	160	no	Inbound directory
tblConfig_IOPS	11	ErrorDirectory	nvarchar	160	no	Error directory
tblConfig_IOPS	12	FullPath	nvarchar	1610	yes	Path to EMSMsgHandler.dll
tblConfig_IOPS	13	ClassName	nvarchar	1610	yes	Namespace
tblConfig_IOPS	14	OutputList	nvarchar	160	yes	Output list
tblConfig_IOPS	15	OutputQueue	nvarchar	180	yes	Output message queue

Table 4.   dbEMSConfig: tblConfigItemData

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblConfigItemData	1	itemName	nvarchar	256	no	Configuration item
tblConfigItemData	2	itemData	ntext	16	yes	XML data for item

Table 5. dbEMSConfig: tblConfigSierraHTTPHandler

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblConfigSierraHTTPHandler	1	C_ID	uniqueidentifier	16	no	Unique ID
tblConfigSierraHTTPHandler	2	HandlerType	int	4	no	Process type
tblConfigSierraHTTPHandler	3	Description	nvarchar	160	yes	Process description
tblConfigSierraHTTPHandler	4	OutputDirectory	nvarchar	160	no	Inbound directory
tblConfigSierraHTTPHandler	5	ErrorDirectory	nvarchar	160	no	Error directory
tblConfigSierraHTTPHandler	6	FullPath	nvarchar	1610	yes	Path to EMSMsgHandler.dll
tblConfigSierraHTTPHandler	7	ClassName	nvarchar	1610	yes	Namespace
tblConfigSierraHTTPHandler	8	OutputQueue	nvarchar	180	yes	Output message queue

Table 6. dbEMSConfig: tblDatabases

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblDatabases	1	databaseId	uniqueidentifier	16	no	Unique identifier GUID
tblDatabases	2	databaseURL	nvarchar	256	no	DB URL (for example, localhost)

Table 7. dbEMSConfig: tblDBVersion

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblDBVersion	1	ROW_ID	uniqueidentifier	16	no	Unique identifier GUID
tblDBVersion	2	DBVersion	nvarchar	16	no	Overall DB version

Table 8.   dbEMSConfig: tblDepartments

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblDepartments	1	departmentId	uniqueidentifier	16	no	Department GUID
tblDepartments	2	facilityId	uniqueidentifier	16	no	Facility GUID
tblDepartments	3	departmentName	nvarchar	64	no	Department name
tblDepartments	4	departmentCode	nvarchar	64	no	Department code
tblDepartments	5	rhythmStripFormat	int	4	no	Rhythm strip formatting
tblDepartments	6	recordingSpeed	int	4	no	Recording speed (see the Field Enumerations tables on page 47)
tblDepartments	7	printStatementCodes	bit	1	no	Print stmt codes indicator
tblDepartments	8	printReasons	bit	1	no	Print reasons indicator
tblDepartments	9	printPreviousECGId	bit	1	no	Print previous ECG indicator
tblDepartments	10	removable	bit	1	no	Removable indicator

Table 9.   dbEMSConfig: tblDRG

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblDRG	1	DRGID	int	4	no	Drg ID
tblDRG	2	Stmt_Ver	char	4	yes	Statement version
tblDRG	3	Stmt_Rev	char	2	yes	Statement revision
tblDRG	4	Stmt_Lang	char	3	yes	Statement language code
tblDRG	5	DRGName	nchar	60	yes	DRG name
tblDRG	6	DRGAbbrv	nchar	20	yes	DRG Abbr
tblDRG	7	DRGCode	int	4	yes	DRG code
tblDRG	8	DRGType	smallint	2	yes	DRG type

Table 10.   dbEMSConfig: tblDX

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblDx	1	DxID	int	4	no	Dx ID
tblDx	2	Stmt_Ver	char	4	yes	Statement version
tblDx	3	Stmt_Rev	char	2	yes	Statement revision
tblDx	4	Stmt_Lang	char	3	yes	Statement language code
tblDx	5	DxName	nchar	60	yes	Dx name
tblDx	6	DxAbbrv	nchar	8	yes	Dx Abbr
tblDx	7	DxCode	smallint	2	yes	Dx code
tblDx	8	DxType	smallint	2	yes	Dx type

Table 11.   dbEMSConfig: tblECGInbox

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblECGInbox	1	inboxId	uniqueidentifier	16	no	Inbox unique identifier GUID
tblECGInbox	2	inboxName	nvarchar	100	yes	Inbox name
tblECGInbox	3	inboxDescription	nvarchar	100	yes	Inbox description
tblECGInbox	4	inboxType	int	4	no	Inbox type (see the Field Enumerations tables on page 47)
tblECGInbox	5	institutionId	uniqueidentifier	16	no	Institution ID
tblECGInbox	6	facilityId	uniqueidentifier	16	no	Facility ID
tblECGInbox	7	departmentId	uniqueidentifier	16	no	Department ID
tblECGInbox	8	emailAddress	nvarchar	100	yes	Email address for inbox
tblECGInbox	9	UserId	nvarchar	256	yes	User ID

Table 12.   dbEMSConfig: tblECGSIgnature

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblECGSignature	1	ES_ID	uniqueidentifier	16	no	Unique identifier GUID
tblECGSignature	2	ECGSource	int	4	no	ECG device source code
tblECGSignature	3	ECGType	int	4	no	ECG type (see the Field Enumerations tables on page 47)
tblECGSignature	4	ECGState	int	4	no	ECG state (see the Field Enumerations tables on page 47)
tblECGSignature	5	ECGAction	int	4	no	ECG action(see the Field Enumerations tables on page 47)
tblECGSignature	6	ECGPriority	int	4	no	ECG priority (see the Field Enumerations tables on page 47)
tblECGSignature	7	ECGSeverity	int	4	no	ECG severity (see the Field Enumerations tables on page 47)
tblECGSignature	8	ECGUserFieldValue	uniqueidentifier	16	no	ECG user field value
tblECGSignature	9	ECGInst	uniqueidentifier	16	no	ECG institution
tblECGSignature	10	ECGFac	uniqueidentifier	16	no	ECG facility
tblECGSignature	11	ECGDept	uniqueidentifier	16	no	ECG department
tblECGSignature	12	PatientID	uniqueidentifier	16	no	Patient ID
tblECGSignature	13	PatientType	int	4	no	Patient type ID (see the Field Enumerations tables on page 47)

Table 13.   dbEMSConfig: tblECGSIgnature

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblExportRules	1	ES_ID	uniqueidentifier	16	no	Unique identifier GUID
tblExportRules	2	ExportFormat	int	4	no	Export format type (see the Field Enumerations tables on page 47)
tblExportRules	3	ExportType	int	4	no	Export type (see the Field Enumerations tables on page 47)
tblExportRules	4	ExportDirectory	nvarchar	510	yes	Directory to export into
tblExportRules	5	ExportQueue	nvarchar	180	yes	Export message queue

Table 14. dbEMSConfig: tblFacilities

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblFacilities	1	facilityId	uniqueidentifier	16	no	Facility GUID
tblFacilities	2	institutionId	uniqueidentifier	16	no	Institution GUID
tblFacilities	3	facilityName	nvarchar	64	no	Facility name
tblFacilities	4	facilityCode	nvarchar	64	no	Facility code
tblFacilities	5	rhythmStripFormat	int	4	no	Rhythm strip formatting (see the Field Enumerations tables on page 47)
tblFacilities	6	recordingSpeed	int	4	no	Recording speed (see the Field Enumerations tables on page 47)
tblFacilities	7	printStatementCodes	bit	1	no	Print stmt codes indicator
tblFacilities	8	printReasons	bit	1	no	Print reasons indicator
tblFacilities	9	printPreviousECGId	bit	1	no	Print previous ECG indicator
tblFacilities	10	removable	bit	1	no	Removable indicator
tblFacilities	11	qtMaleWarnLimit	smallint	2	no	Qt male warning limit
tblFacilities	12	qtMaleCritLimit	smallint	2	no	Qt male critical limit
tblFacilities	13	deltaQtMaleWarnLimit	smallint	2	no	Delta Qt male warning limit
tblFacilities	14	deltaQtMaleCritLimit	smallint	2	no	Delta Qt male critical limit
tblFacilities	15	qtcbMaleWarnLimit	smallint	2	no	Qtcb male warning limit
tblFacilities	16	qtcbMaleCritLimit	smallint	2	no	Qtcb male critical limit
tblFacilities	17	deltaQtcbMaleWarnLimit	smallint	2	no	Delta Qtcb male warning limit
tblFacilities	18	deltaQtcbMaleCritLimit	smallint	2	no	Delta Qtcb male critical limit
tblFacilities	19	qtcfMaleWarnLimit	smallint	2	no	Qtcf male warning limit
tblFacilities	20	qtcfMaleCritLimit	smallint	2	no	Qtcf male critical limit
tblFacilities	21	deltaQtcfMaleWarnLimit	smallint	2	no	Delta Qtcf male warning limit
tblFacilities	22	deltaQtcfMaleCritLimit	smallint	2	no	Delta Qtcf male critical limit
tblFacilities	23	qtFemaleWarnLimit	smallint	2	no	Qt female warning limit
tblFacilities	24	qtFemaleCritLimit	smallint	2	no	Qt female critical limit
tblFacilities	25	deltaQtFemaleWarnLimit	smallint	2	no	Delta Qt female warning limit
tblFacilities	26	deltaQtFemaleCritLimit	smallint	2	no	Delta Qt female critical limit
tblFacilities	27	qtcbFemaleWarnLimit	smallint	2	no	Qtcb female warning limit
tblFacilities	28	qtcbFemaleCritLimit	smallint	2	no	Qtcb female critical limit
tblFacilities	29	deltaQtcbFemaleWarnLimit	smallint	2	no	Delta Qtcb female warning limit
tblFacilities	30	deltaQtcbFemaleCritLimit	smallint	2	no	Delta Qtcb female critical limit

Table 14.   dbEMSConfig: tblFacilities

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblFacilities	31	qtcfFemaleWarnLimit	smallint	2	no	Qtcf female warning limit
tblFacilities	32	qtcfFemaleCritLimit	smallint	2	no	Qtcf female critical limit
tblFacilities	33	deltaQtcfFemaleWarnLimit	smallint	2	no	Delta Qtcf female warning limit
tblFacilities	34	deltaQtcfFemaleCritLimit	smallint	2	no	Delta Qtcf female critical limit

Table 15.   dbEMSConfig: tblFaxRules

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblFaxRules	1	ES_ID	uniqueidentifier	16	no	Unique identifier GUID
tblFaxRules	2	FaxNumber	nvarchar	60	no	Fax number
tblFaxRules	3	FaxRecip	nvarchar	60	no	Fax recipient
tblFaxRules	4	IncludeCoverSheet	bit	1	no	Cover sheet indicator
tblFaxRules	5	CoverSheet	nvarchar	510	no	Cover sheet text
tblFaxRules	6	FaxSubject	nvarchar	100	no	Fax subject
tblFaxRules	7	FaxNote	nvarchar	4000	no	Fax body
tblFaxRules	8	ReportType	int	4	no	Report type (see the Field Enumerations tables on page 47)
tblFaxRules	9	FaxPreviousECG	bit	1	no	Fax previous ECG indicator
tblFaxRules	10	batch	bit	1	no	Fax batch indicator
tblFaxRules	11	batchTimes	nvarchar	256	yes	Batch times to print
tblFaxRules	12	FaxToPhysician	bit	1	no	Fax to physician indicator

Table 16. dbEMSConfig: tblGlobals

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblGlobals	1	C_ID	uniqueidentifier	16	no	Unique identifier GUID
tblGlobals	2	clock	int	4	no	Clock (see the Field Enumerations tables on page 47)
tblGlobals	3	units	int	4	no	Units (see the Field Enumerations tables on page 47)
tblGlobals	4	editorTimeout	smallint	2	no	Client editor automatic timeout interval minutes
tblGlobals	5	coboLabel	nvarchar	100	yes	Confirm on behalf of label
tblGlobals	6	unconfirmedLabel	nvarchar	100	yes	Unconfirmed label
tblGlobals	7	confirmedByLabel	nvarchar	100	yes	Confirmed by label
tblGlobals	8	defaultDiskDrive	nvarchar	6	no	Default disk drive
tblGlobals	9	language	int	4	no	Default language
tblGlobals	10	locale	int	4	no	Locale
tblGlobals	11	interactiveQuery	bit	1	no	Interactive query enabled indicator
tblGlobals	12	confirmOnce	bit	1	no	Confirm once indicator
tblGlobals	13	enableComparison	bit	1	no	Enable serial comparison indicator
tblGlobals	14	sameInstitution	bit	1	no	Serial compare from same institution indicator
tblGlobals	15	sameFacility	bit	1	no	Serial compare from same facility indicator
tblGlobals	16	confPrevECG	bit	1	no	Serial compare previous ECG confirmed indicator
tblGlobals	17	ageDiffThresh	bigint	8	no	Age between serial compare ECGs in minutes
tblGlobals	18	defEMailAddress	nvarchar	128	no	Default system email addr
tblGlobals	19	defSMTPServer	nvarchar	510	yes	Default system smtp server
tblGlobals	20	confReauthenticate	bit	1	no	Electronic signature required indicator
tblGlobals	21	printGrid	bit	1	no	Print grid on reports indicator
tblGlobals	22	faxGrid	bit	1	no	Print grid on faxes indicator
tblGlobals	23	printBarCodes	int	4	no	Print barcode on reports indicator
tblGlobals	24	prevLabelText	nvarchar	100	no	Previous ECG label text
tblGlobals	25	statLabelText	nvarchar	100	no	Stat label text
tblGlobals	26	printStatementCodes	bit	1	no	Print statement codes indicator
tblGlobals	27	printReasons	bit	1	no	Print reasons indicator
tblGlobals	28	printArrFlag	bit	1	no	Print arryth indicator
tblGlobals	29	exportResolution	int	4	no	Export resolution (see the Field Enumerations tables on page 47)

Table 16. dbEMSConfig: tblGlobals

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblGlobals	30	exportColorDepth	int	4	no	Export color depth (see the Field Enumerations tables on page 47)
tblGlobals	31	exportOrientation	int	4	no	Export orientation (see the Field Enumerations tables on page 47)
tblGlobals	32	confDateTimeShown	int	4	no	Confirm datetime shown
tblGlobals	33	whichECGsShown	int	4	no	Which ECGs shown
tblGlobals	34	leadOrder	int	4	no	Lead order
tblGlobals	35	reportSensitivity	int	4	no	Report sensitivity (see the Field Enumerations tables on page 47)
tblGlobals	36	printSpeed	int	4	no	Print speed (see the Field Enumerations tables on page 47)
tblGlobals	37	qtMaleWarnLimit	smallint	2	no	Qt male warning limit
tblGlobals	38	qtMaleCritLimit	smallint	2	no	Qt male critical limit
tblGlobals	39	deltaQtMaleWarnLimit	smallint	2	no	Delta Qt male warning limit
tblGlobals	40	deltaQtMaleCritLimit	smallint	2	no	Delta Qt male critical limit
tblGlobals	41	qtcbMaleWarnLimit	smallint	2	no	Qtcb male warning limit
tblGlobals	42	qtcbMaleCritLimit	smallint	2	no	Qtcb male critical limit
tblGlobals	43	deltaQtcbMaleWarnLimit	smallint	2	no	Delta Qtcb male warning limit
tblGlobals	44	deltaQtcbMaleCritLimit	smallint	2	no	Delta Qtcb male critical limit
tblGlobals	45	qtcfMaleWarnLimit	smallint	2	no	Qtcf male warning limit
tblGlobals	46	qtcfMaleCritLimit	smallint	2	no	Qtcf male critical limit
tblGlobals	47	deltaQtcfMaleWarnLimit	smallint	2	no	Delta Qtcf male warning limit
tblGlobals	48	deltaQtcfMaleCritLimit	smallint	2	no	Delta Qtcf male critical limit
tblGlobals	49	qtFemaleWarnLimit	smallint	2	no	Qt female warning limit
tblGlobals	50	qtFemaleCritLimit	smallint	2	no	Qt female critical limit
tblGlobals	51	deltaQtFemaleWarnLimit	smallint	2	no	Delta Qt female warning limit
tblGlobals	52	deltaQtFemaleCritLimit	smallint	2	no	Delta Qt female critical limit
tblGlobals	53	qtcbFemaleWarnLimit	smallint	2	no	Qtcb female warning limit
tblGlobals	54	qtcbFemaleCritLimit	smallint	2	no	Qtcb female critical limit
tblGlobals	55	deltaQtcbFemaleWarnLimit	smallint	2	no	Delta Qtcb female warning limit
tblGlobals	56	deltaQtcbFemaleCritLimit	smallint	2	no	Delta Qtcb female critical limit
tblGlobals	57	qtcfFemaleWarnLimit	smallint	2	no	Qtcf female warning limit
tblGlobals	58	qtcfFemaleCritLimit	smallint	2	no	Qtcf female critical limit
tblGlobals	59	deltaQtcfFemaleWarnLimit	smallint	2	no	Delta Qtcf female warning limit
tblGlobals	60	deltaQtcfFemaleCritLimit	smallint	2	no	Delta Qtcf female critical limit

Table 16.   dbEMSConfig: tblGlobals

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblGlobals	61	smtpLogonRequired	bit	1	no	Login for SMTP required indicator
tblGlobals	62	smtpSecureLogon	bit	1	no	Secure logon for smtp indicator
tblGlobals	63	smtpLogonName	nvarchar	80	yes	Smtp logon name
tblGlobals	64	smtpEncryptedPassword	varchar	88	yes	Smtp encrypted password
tblGlobals	65	smtpPortNumber	int	4	no	Smtp port number
tblGlobals	66	smtpUseSSL	bit	1	no	Use SSL for smtp
tblGlobals	67	alwaysUseDefEMail	bit	1	no	Always use default email indicator
tblGlobals	68	systemAlertEMail	nvarchar	128	yes	System notification email addr
tblsGlobals	69	scNowAbsentOverRemainsForPrevStmt	bit	1	no	Displays "Now Absent" SC modifier instead of "Remains" after serial comparison
tblsGlobals	70	scCurStmtOverPrevStmt	bit	1	no	Displays current statement instead of prev. statement after serial comparison
tblsGlobals	71	scDoNotDisplayNowAbsentStmts	bit	1	no	"Now Absent" statements will not be displayed after serial comparison
tblsGlobals	72	scDisplayNowAbsentStmtsAtEnd	bit	1	no	"Now Absent" statements will be displayed at the bottom after serial comparison
tblsGlobals	73	scModifierDisplayOption	bit	1	no	Dictates whether SC symbol and/or full description will be displayed after serial comparison
tblsGlobals	74	useECGReportSetting	bit	1	no	Determines whether <reportinfo> setting will dictate what will be display on ECG report

Table 17.   dbEMSConfig: tblGroupInfo

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblGroupInfo	1	groupid	int	4	no	Group ID
tblGroupInfo	2	groupsid	nvarchar	max	yes	Internal group ID
tblGroupInfo	3	groupname	nvarchar	max	yes	Group name
tblGroupInfo	4	domain	nvarchar	max	yes	Domain name
tblGroupInfo	5	gtype	int	4	yes	Group type

Table 18.	dbEMSConfig: tblHx					
Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblHx	1	HxID	int	4	no	Hx ID
tblHx	2	Stmt_Ver	char	4	yes	Statement version
tblHx	3	Stmt_Rev	char	2	yes	Statement revision
tblHx	4	Stmt_Lang	char	3	yes	Statement language
tblHx	5	HxName	nchar	60	yes	Hx name
tblHx	6	HxAbbrv	nchar	8	yes	Hx abbr
tblHx	7	HxCode	smallint	2	yes	Hx code
tblHx	8	HxType	smallint	2	yes	Hx type

Table 19. dbEMSConfig: tblInstitutions

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblInstitutions	1	institutionId	uniqueidentifier	16	no	Unique identifier GUID
tblInstitutions	2	institutionName	nvarchar	64	no	Institution name
tblInstitutions	3	institutionCode	nvarchar	64	no	Institution code
tblInstitutions	4	rhythmStripFormat	int	4	no	Rhythm strip format (see the Field Enumerations tables on page 47)
tblInstitutions	5	recordingSpeed	int	4	no	Recording speed (see the Field Enumerations tables on page 47)
tblInstitutions	6	printStatementCodes	bit	1	no	Print statement code indicator
tblInstitutions	7	printReasons	bit	1	no	Print reason indicator
tblInstitutions	8	printPreviousECGId	bit	1	no	Print previous ECG indicator
tblInstitutions	9	removable	bit	1	no	Removable indicator
tblInstitutions	10	qtMaleWarnLimit	smallint	2	no	Qt male warning limit
tblInstitutions	11	qtMaleCritLimit	smallint	2	no	Qt male critical limit
tblInstitutions	12	deltaQtMaleWarnLimit	smallint	2	no	Delta Qt male warning limit
tblInstitutions	13	deltaQtMaleCritLimit	smallint	2	no	Delta Qt male critical limit
tblInstitutions	14	qtcbMaleWarnLimit	smallint	2	no	Qtcb male warning limit
tblInstitutions	15	qtcbMaleCritLimit	smallint	2	no	Qtcb male critical limit
tblInstitutions	16	deltaQtcbMaleWarnLimit	smallint	2	no	Delta Qtcb male warning limit
tblInstitutions	17	deltaQtcbMaleCritLimit	smallint	2	no	Delta Qtcb male critical limit
tblInstitutions	18	qtcfMaleWarnLimit	smallint	2	no	Qtcf male warning limit
tblInstitutions	19	qtcfMaleCritLimit	smallint	2	no	Qtcf male critical limit
tblInstitutions	20	deltaQtcfMaleWarnLimit	smallint	2	no	Delta Qtcf male warning limit
tblInstitutions	21	deltaQtcfMaleCritLimit	smallint	2	no	Delta Qtcf male critical limit
tblInstitutions	22	qtFemaleWarnLimit	smallint	2	no	Qt female warning limit
tblInstitutions	23	qtFemaleCritLimit	smallint	2	no	Qt female critical limit
tblInstitutions	24	deltaQtFemaleWarnLimit	smallint	2	no	Delta Qt female warning limit
tblInstitutions	25	deltaQtFemaleCritLimit	smallint	2	no	Delta Qt female critical limit
tblInstitutions	26	qtcbFemaleWarnLimit	smallint	2	no	Qtcb female warning limit
tblInstitutions	27	qtcbFemaleCritLimit	smallint	2	no	Qtcb female critical limit
tblInstitutions	28	deltaQtcbFemaleWarnLimit	smallint	2	no	Delta Qtcb female warning limit
tblInstitutions	29	deltaQtcbFemaleCritLimit	smallint	2	no	Delta Qtcb female critical limit
tblInstitutions	30	qtcfFemaleWarnLimit	smallint	2	no	Qtcf female warning limit

Table 19.   dbEMSConfig: tblInstitutions

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblInstitutions	31	qtcfFemaleCritLimit	smallint	2	no	Qtcf female critical limit
tblInstitutions	32	deltaQtcfFemaleWarnLimit	smallint	2	no	Delta Qtcf female warning limit
tblInstitutions	33	deltaQtcfFemaleCritLimit	smallint	2	no	Delta Qtcf female critical limit

Table 20.   dbEMSConfig: tblLocations

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblLocations	1	locationId	uniqueidentifier	16	no	Primary identifier GUID for locations
tblLocations	2	databaseId	uniqueidentifier	16	no	Primary identifier linking to tblDatabases
tblLocations	3	institutionId	uniqueidentifier	16	no	Primary identifier GUID for institutions
tblLocations	4	facilityId	uniqueidentifier	16	no	Primary identifier GUID for facilities
tblLocations	5	departmentId	uniqueidentifier	16	no	Primary identifier GUID for departments

Table 21.   dbEMSConfig: tblMembershipInfo

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblMembershipInfo	1	groupId	int	4	yes	Group ID member part of
tblMembershipInfo	2	userid	int	4	yes	User ID
tblMembershipInfo	3	isgroup	int	4	yes	Is user a group?

Table 22.   dbEMSConfig: tblModifier

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblModifier	1	ModID	int	4	no	Modifier ID
tblModifier	2	Stmt_Ver	char	4	yes	Statement version
tblModifier	3	Stmt_Rev	char	2	yes	Statement revision
tblModifier	4	Stmt_Lang	char	3	yes	Statement language

Table 22.   dbEMSConfig: tblModifier

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblModifier	5	ModName	nchar	60	yes	Modifier name
tblModifier	6	ModAbbrv	nchar	6	yes	Modifier Abbr
tblModifier	7	ModCode	smallint	2	yes	Modifier code
tblModifier	8	ModType	smallint	2	yes	Modifier type (enum)

Table 23.   dbEMSConfig: tblNotificationRules

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblNotificationRules	1	ES_ID	uniqueidentifier	16	no	Unique identifier GUID
tblNotificationRules	2	NotifyFrom	nvarchar	512	no	From field
tblNotificationRules	3	NotifyTo	nvarchar	512	no	To field
tblNotificationRules	4	NotifyCC	nvarchar	512	no	Cc field
tblNotificationRules	5	NotifyBCC	nvarchar	512	no	Bcc field
tblNotificationRules	6	batch	bit	1	no	Batch indicator
tblNotificationRules	7	batchTimes	nvarchar	256	yes	Batch notification times
tblNotificationRules	8	NotifyToPhysician	bit	1	no	To physician indicator
tblNotificationRules	9	NotifyCCPhysician	bit	1	no	Cc physician indicator
tblNotificationRules	10	NotifyBCCPhysician	bit	1	no	Bcc physician indicator

Table 24.   dbEMSConfig: tblOrderMatchSettings

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblOrderMatchSettings	1	PatientID	bit	1	no	Match patient ID indicator
tblOrderMatchSettings	2	MedicalRecordNumber	bit	1	no	Match medical record number indicator
tblOrderMatchSettings	3	LastName	bit	1	no	Match last name indicator
tblOrderMatchSettings	4	DateOfBirth	bit	1	no	Match date of birth indicator
tblOrderMatchSettings	5	Gender	bit	1	no	Match gender indicator

Table 25.   dbEMSConfig: tblOrderQueues

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblOrderQueues	1	OQ_ID	uniqueidentifier	16	no	Unique identifier GUID
tblOrderQueues	2	queueName	nvarchar	64	no	Queue name
tblOrderQueues	3	queueDescription	nvarchar	100	no	Queue descriptor
tblOrderQueues	4	canModify	bit	1	no	Modifiable indicator

Table 26.   dbEMSConfig: tblPhysicians

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblPhysicians	1	PhysicianId	uniqueidentifier	16	no	Unique GUID identifier for physician ID
tblPhysicians	2	PhysicianNum	nvarchar	128	no	Physician number, text
tblPhysicians	3	NameLast	nvarchar	80	yes	Physician last name
tblPhysicians	4	NameFirst	nvarchar	80	yes	Physician first name
tblPhysicians	5	NameMiddle	nvarchar	80	yes	Physician middle name
tblPhysicians	6	InstitutionId	uniqueidentifier	16	no	Associated institution GUID identifier
tblPhysicians	7	FacilityId	uniqueidentifier	16	no	Associated facility GUID identifier
tblPhysicians	8	DepartmentId	uniqueidentifier	16	no	Associated department GUID identifier
tblPhysicians	9	Email	nvarchar	512	yes	Associated email addr
tblPhysicians	10	FaxNumber	nvarchar	60	yes	Associated fax number
tblPhysicians	11	FaxRecipient	nvarchar	60	yes	Associated faxecipient

Table 27.   dbEMSConfig: tblPrintRules

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblPrintRules	1	ES_ID	uniqueidentifier	16	no	Unique identifier GUID
tblPrintRules	2	PrintTo	nvarchar	160	no	Print to device name
tblPrintRules	3	ReportType	int	4	no	Report type (see the Field Enumerations tables on page 47)
tblPrintRules	4	PrintPreviousECG	bit	1	no	Print previous ECG indicator
tblPrintRules	5	Copies	int	4	yes	Number of copies to print
tblPrintRules	6	batch	bit	1	no	Batch print indicator
tblPrintRules	7	batchTimes	nvarchar	256	yes	Times to print batches

Table 28.   dbEMSConfig: tblRace

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblRace	1	RaceID	int	4	no	Race ID
tblRace	2	Stmt_Ver	char	4	yes	Statement version
tblRace	3	Stmt_Rev	char	2	yes	Statement revision
tblRace	4	Stmt_Lang	char	3	yes	Statement language
tblRace	5	RaceName	nchar	60	yes	Race name
tblRace	6	RaceAbbrv	nchar	12	yes	Race Abbr
tblRace	7	RaceCode	smallint	2	yes	Race code
tblRace	8	RaceType	smallint	2	yes	Race type

Table 29.   dbEMSConfig: tblRx

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblRx	1	RxID	int	4	no	Rx ID
tblRx	2	Stmt_Ver	char	4	yes	Statement version
tblRx	3	Stmt_Rev	char	2	yes	Statement revision
tblRx	4	Stmt_Lang	char	3	yes	Statement language
tblRx	5	RxName	nchar	60	yes	Rx name
tblRx	6	RxAbbrv	nchar	8	yes	Rx abbr
tblRx	7	RxCode	smallint	2	yes	Rx code
tblRx	8	RxType	smallint	2	yes	Rx type

Table 30.   dbEMSConfig: tblSCModifier

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblSCModifier	1	SCModID	int	4	no	Serial comparison modifier ID
tblSCModifier	2	Stmt_Ver	char	4	yes	Statement version
tblSCModifier	3	Stmt_Rev	char	2	yes	Statement revision
tblSCModifier	4	Stmt_Lang	char	3	yes	Statement language
tblSCModifier	5	SCModName	nchar	60	yes	Serial comparison modifier name
tblSCModifier	6	SCModAbbrv	nchar	4	yes	Serial comparison modifier abbr
tblSCModifier	7	SCModSymbol	char	1	yes	Serial comparison modifier symbol
tblSCModifier	8	SCModCode	smallint	2	yes	Serial comparison modifier code
tblSCModifier	9	SCModType	smallint	2	yes	Serial comparison modifier type

Table 31. dbEMSConfig: tblSCModifier Details								NOTE. Criteria version 0A corresponds to serial comparison criteria version SC02
Item	Stmt_Ver (char-4)	Stmt_Rev (char-2)	Stmt_Lang (char-3)	SCModName (nchar-50)	SCModAbbrv (nchar-2)	SCModSymbol (char-1)	SCModCode (smallint)	SCModType (smallint)
1	0A	01	ENU, DAU, FIN, NOR, SVE, NLD, FRA, DEU, ITA, ESP, CHS, CHT, JPN, PTG	[Remains]	RM	=	4	0
2	0A	01	ENU, DAU, FIN, NOR, SVE, NLD, FRA, DEU, ITA, ESP, CHS, CHT, JPN, PTG	[Now Present]	NP	+	8	0
3	0A	01	ENU, DAU, FIN, NOR, SVE, NLD, FRA, DEU, ITA, ESP, CHS, CHT, JPN, PTG	[Now Absent]	NA	-	9	0
4	0A	01	ENU, DAU, FIN, NOR, SVE, NLD, FRA, DEU, ITA, ESP, CHS, CHT, JPN, PTG	[Insig. Chg.]	IM	?	10	0
5	0A	01	ENU, DAU, FIN, NOR, SVE, NLD, FRA, DEU, ITA, ESP, CHS, CHT, JPN, PTG	[More Prom.]	MP	>	11	0
6	0A	01	ENU, DAU, FIN, NOR, SVE, NLD, FRA, DEU, ITA, ESP, CHS, CHT, JPN, PTG	[Less Prom.]	LP	<	12	0
7	0A	01	ENU, DAU, FIN, NOR, SVE, NLD, FRA, DEU, ITA, ESP, CHS, CHT, JPN, PTG	[Has Replcd.]	HR	{	13	0
Item	Stmt_Ver (char-4)	Stmt_Rev (char-2)	Stmt_Lang (char-3)	SCModName (nchar-50)	SCModAbbrv (nchar-2)	SCModSymbol (char-1)	SCModCode (smallint)	SCModType (smallint)
8	0A	01	ENU, DAU, FIN, NOR, SVE, NLD, FRA, DEU, ITA, ESP, CHS, CHT, JPN, PTG	[Been Replcd.]	BR	}	14	0
9	0A	01	ENU, DAU, FIN, NOR, SVE, NLD, FRA, DEU, ITA, ESP, CHS, CHT, JPN, PTG	[Now Absent]	AI	~	15	0

Table 32. dbEMSConfig: tblSCModifier Details NOTE. Criteria version 09 corresponds to serial comparison criteria version SC01								
Item	Stmt_Ver (char-4)	Stmt_Rev (char-2)	Stmt_Lang (char-3)	SCModName (nchar-50)	SCModAbbrv (nchar-2)	SCModSymbol (char-1)	SCModCode (smallint)	SCModType (smallint)
1	09	01	ENU, NLD, FRA, DEU, ITA, ESP	[Remains]	RM	=	4	0
2	09	01	ENU, NLD, FRA, DEU, ITA, ESP	[Now Present]	NP	+	8	0
3	09	01	ENU, NLD, FRA, DEU, ITA, ESP	[Now Absent]	NA	-	9	0
4	09	01	ENU, NLD, FRA, DEU, ITA, ESP	[Insig. Chg.]	IM	?	10	0
5	09	01	ENU, NLD, FRA, DEU, ITA, ESP	[More Prom.]	MP	>	11	0
6	09	01	ENU, NLD, FRA, DEU, ITA, ESP	[Less Prom.]	LP	<	12	0
7	09	01	ENU, NLD, FRA, DEU, ITA, ESP	[Has Replcd.]	HR	{	13	0
8	09	01	ENU, NLD, FRA, DEU, ITA, ESP	[Been Replcd.]	BR	}	14	0
9	09	01	ENU, NLD, FRA, DEU, ITA, ESP	[Now Absent]	AI	~	15	0

Table 33. dbEMSConfig: tblSCModifier Details NOTE. Criteria version 08 corresponds to serial comparison criteria version SC00								
Item	Stmt_Ver (char-4)	Stmt_Rev (char-2)	Stmt_Lang (char-3)	SCModName (nchar-50)	SCModAbbrv (nchar-2)	SCModSymbol (char-1)	SCModCode (smallint)	SCModType (smallint)
1	08	01	ENU, NLD, FRA, DEU, ITA, ESP	[Remains]	RM	=	4	0
2	08	01	ENU, NLD, FRA, DEU, ITA, ESP	[Now Present]	NP	+	8	0
3	08	01	ENU, NLD, FRA, DEU, ITA, ESP	[Now Absent]	NA	-	9	0
4	08	01	ENU, NLD, FRA, DEU, ITA, ESP	[Insig. Chg.]	IM	?	10	0
5	08	01	ENU, NLD, FRA, DEU, ITA, ESP	[More Prom.]	MP	>	11	0
6	08	01	ENU, NLD, FRA, DEU, ITA, ESP	[Less Prom.]	LP	<	12	0
7	08	01	ENU, NLD, FRA, DEU, ITA, ESP	[Has Replcd.]	HR	{	13	0
8	08	01	ENU, NLD, FRA, DEU, ITA, ESP	[Been Replcd.]	BR	}	14	0
9	08	01	ENU, NLD, FRA, DEU, ITA, ESP	[Now Absent]	AI	~	15	0

Table 34.　dbEMSConfig:　tblSecurityRoles

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblSecurityRoles	1	SR_ID	uniqueidentifier	16	no	Security roles unique identifier GUID
tblSecurityRoles	2	RoleIndex	int	4	no	Role index
tblSecurityRoles	3	ECGSource	int	4	no	ECG device ID
tblSecurityRoles	4	ECGType	int	4	no	ECG type
tblSecurityRoles	5	ECGInst	uniqueidentifier	16	no	Unique ID ECG Institution
tblSecurityRoles	6	ECGFac	uniqueidentifier	16	no	Unique ID ECG facility
tblSecurityRoles	7	ECGDept	uniqueidentifier	16	no	Unique ID ECG department
tblSecurityRoles	8	PatientID	uniqueidentifier	16	no	Unique ID ECG patient ID
tblSecurityRoles	9	PatientType	int	4	no	Patient type (see the Field Enumerations tables on page 47)
tblSecurityRoles	10	RoleID	int	4	no	Role ID
tblSecurityRoles	11	UserID	nvarchar	256	no	User ID

Table 35. dbEMSConfig: tblSeverity

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblSeverity	1	SevID	int	4	no	Severity ID
tblSeverity	2	Stmt_Ver	char	4	yes	Statement version
tblSeverity	3	Stmt_Rev	char	2	yes	Statement revision
tblSeverity	4	Stmt_Lang	char	3	yes	Statement language
tblSeverity	5	SevName	nchar	60	yes	Severity name
tblSeverity	6	SevAbbrv	nchar	4	yes	Severity abbr
tblSeverity	7	SevCode	smallint	2	yes	Severity code
tblSeverity	8	SevType	smallint	2	yes	Severity type (enum)

Table 36. dbEMSConfig: tblStatePushRules

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblStatePushRules	1	ES_ID	uniqueidentifier	16	no	Unique identifier GUID
tblStatePushRules	2	ECGState	int	4	no	ECG state

Table 37.   dbEMSConfig: tblStmtsBase

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblStmtsBase	1	Stmt_ID	int	4	no	Statements base ID
tblStmtsBase	2	Stmt_Ver	char	4	yes	Statement version
tblStmtsBase	3	Stmt_Rev	char	2	yes	Statement revision
tblStmtsBase	4	Stmt_LibNo	smallint	2	yes	Statement library number
tblStmtsBase	5	Stmt_Code	char	6	yes	Statement code
tblStmtsBase	6	Stmt_Delim	smallint	2	yes	Statement delimiter
tblStmtsBase	7	Stmt_Class	smallint	2	yes	Statement class
tblStmtsBase	8	Stmt_Var1	smallint	2	yes	Statement variable 1
tblStmtsBase	9	Stmt_Var2	smallint	2	yes	Statement variable 2
tblStmtsBase	10	Stmt_Var3	smallint	2	yes	Statement variable 3
tblStmtsBase	11	Stmt_Var4	smallint	2	yes	Statement variable 4
tblStmtsBase	12	Stmt_SCCategory	smallint	2	yes	Statement serial comparison category
tblStmtsBase	13	Stmt_SCCondition	smallint	2	yes	Statement serial comparison condition
tblStmtsBase	14	Stmt_SCLocation	smallint	2	yes	Statement serial comparison location
tblStmtsBase	15	Stmt_SCGenCat	varchar	10	yes	Statement serial comparison general category
tblStmtsBase	16	Stmt_SCGenStmt	varchar	10	yes	Statement serial comparison general statement
tblStmtsBase	17	Stmt_DxCategory	smallint	2	yes	Statement Dx category

Table 38.   dbEMSConfig: tblStmtsCategory

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblStmtsCategory	1	CatId	int	4	no	Catalog ID
tblStmtsCategory	2	Stmt_Ver	char	4	yes	Statement version
tblStmtsCategory	3	Stmt_Rev	char	2	yes	Statement revision
tblStmtsCategory	4	CatLevel1Id	smallint	2	yes	Category level 1 ID
tblStmtsCategory	5	CatLevel2Id	smallint	2	yes	Category level 2 ID
tblStmtsCategory	6	CatLevel3Id	smallint	2	yes	Category level 3 ID
tblStmtsCategory	7	CatLevel4Id	smallint	2	yes	Category level 4 ID
tblStmtsCategory	8	CatStmtLibNo	smallint	2	yes	Category statement library number
tblStmtsCategory	9	CatStmtVisible	bit	1	yes	Category statements visible indicator

Table 39.   dbEMSConfig: tblStmtsCategoryDescriptions

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblStmtsCategoryDescriptions	1	CatDscrId	int	4	no	Catalog description ID
tblStmtsCategoryDescriptions	2	Stmt_Ver	char	4	yes	Statement version
tblStmtsCategoryDescriptions	3	Stmt_Rev	char	2	yes	Statement revision
tblStmtsCategoryDescriptions	4	Stmt_Lang	char	3	yes	Statement language
tblStmtsCategoryDescriptions	5	CatLevel1Id	smallint	2	yes	Category level 1 ID
tblStmtsCategoryDescriptions	6	CatLevel2Id	smallint	2	yes	Category level 2 ID
tblStmtsCategoryDescriptions	7	CatLevel3Id	smallint	2	yes	Category level 3 ID
tblStmtsCategoryDescriptions	8	CatLevel4Id	smallint	2	yes	Category level 4 ID
tblStmtsCategoryDescriptions	9	CatDescription	nvarchar	512	yes	Category description

Table 40.   dbEMSConfig: tblStmtsSets

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblStmtSets	1	StmtSetID	smallint	2	no	Statement set ID
tblStmtSets	2	StmtSetVersion	char	4	yes	Statement set version
tblStmtSets	3	StmtSetRevision	char	2	yes	Statement set revision
tblStmtSets	4	StmtSetLanguage	char	3	yes	Statement set language
tblStmtSets	5	StmtSetVersionDate	datetime	8	yes	Statement set version date
tblStmtSets	6	StmtSetModifiedDate	datetime	8	yes	Statement set version modified date
tblStmtSets	7	StmtSetType	smallint	2	yes	Statement set type
tblStmtSets	8	StmtSetDescription	char	256	yes	Statement set description

Table 41.   dbEMSConfig: tblStmtsLocal

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblStmtsLocal	1	Stmt_ID	int	4	no	Statement ID
tblStmtsLocal	2	Stmt_Ver	char	4	yes	Statement version
tblStmtsLocal	3	Stmt_Rev	char	2	yes	Statement revision
tblStmtsLocal	4	Stmt_Lang	char	3	yes	Statement language
tblStmtsLocal	5	Stmt_LibNo	smallint	2	yes	Statement library number
tblStmtsLocal	6	Stmt_CodeAlias	nchar	12	yes	Statement code alias
tblStmtsLocal	7	Stmt_LHS	nchar	510	yes	Statement left hand statement
tblStmtsLocal	8	Stmt_CustomLHS	nvarchar	510	yes	Statement custom left hand statement
tblStmtsLocal	9	Stmt_RHS	nchar	510	yes	Statement right hand statement
tblStmtsLocal	10	Stmt_CustomRHS	nvarchar	510	yes	Statement custom right hand statement
tblStmtsLocal	11	Stmt_Type	smallint	2	yes	Statement type
tblStmtsLocal	12	Stmt_Var1Order	smallint	2	yes	Statement variable 1 order
tblStmtsLocal	13	Stmt_Var2Order	smallint	2	yes	Statement variable 2 order
tblStmtsLocal	14	Stmt_Var3Order	smallint	2	yes	Statement variable 3 order
tblStmtsLocal	15	Stmt_Var4Order	smallint	2	yes	Statement variable 4 order
tblStmtsLocal	16	Stmt_Mod1	tinyint	1	yes	Statement modifier 1
tblStmtsLocal	17	Stmt_Mod2	tinyint	1	yes	Statement modifier 2
tblStmtsLocal	18	Stmt_Mod3	tinyint	1	yes	Statement modifier 3

Table 42.   dbEMSConfig: tblSx

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblSx	1	SxID	int	4	no	Sx ID
tblSx	2	Stmt_Ver	char	4	yes	Statement version
tblSx	3	Stmt_Rev	char	2	yes	Statement revision
tblSx	4	Stmt_Lang	char	3	yes	Statement language
tblSx	5	SxName	nchar	60	yes	Sx name
tblSx	6	SxAbbrv	nchar	8	yes	Sx abbr
tblSx	7	SxCode	smallint	2	yes	Sx code
tblSx	8	SxType	smallint	2	yes	Sx type

Table 43.   dbEMSConfig: tblUserFieldAttributes

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblUserFieldAttributes	1	UFA_ID	uniqueidentifier	16	no	Unique identifier GUID for user field attributes
tblUserFieldAttributes	2	UF_ID	uniqueidentifier	16	no	Unique identifier GUID for user field
tblUserFieldAttributes	3	attributeValue	nvarchar	64	no	User field value

Table 44.   dbEMSConfig: tblUserFields

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblUserFields	1	UF_ID	uniqueidentifier	16	no	Unique identifier GUID for user field
tblUserFields	2	fieldNumber	tinyint	1	no	User field number
tblUserFields	3	fieldLabel	nvarchar	64	no	User field label

Table 45.   dbEMSConfig: tblUserInfo

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblUserInfo	1	userid	int	4	no	User ID
tblUserInfo	2	usersid	nvarchar	max	yes	Internal user ID
tblUserInfo	3	acctname	nvarchar	max	yes	Account name
tblUserInfo	4	fullname	nvarchar	max	yes	Full name descriptor
tblUserInfo	5	domain	nvarchar	max	yes	Domain name
tblUserInfo	6	svr	nvarchar	max	yes	Server name

Table 46.   dbEMSConfig: tblWorkflowRules

Table_name	Col_order	Col_name	Col_datatype	Col_length	Col_nullable	Col_description
tblWorkflowRules	1	ES_ID	uniqueidentifier	16	no	Unique identifier GUID for workflow rule
tblWorkflowRules	2	ECGRule	int	4	no	Workflow rule

FIELD ENUMERATIONS

Field enumeration tables describe the available data types for each field.

col_name	enum	value
ECGType	Unknown	0
	Standard12	1
	Standard15	2
	Standard16	3
	Standard18	4
	EASI	5
	MIDA	6
	MasonLikar	7
	Other	8

col_name	enum	value
EventID	Unknown	0
	NewArrival	1
	Assignment	2
	EcgEdit	3
	SerialComparison	4
	Export	5
	Print	6
	Fax	7
	Email	8
	StateChange	9
	SysConfig	10
	AuditTrackingAccess	11
	EcgView	12

col_name	enum	value
eventType	Unknown	0
	Queuing	1
	Execution	2

col_name	enum	value
ageUnits	unknown	0
	years	1
	months	2
	weeks	3
	days	4
	hours	5
	minutes	6

col_name	enum	value
weightUnits	unknown	0
	english	1
	metric	2

col_name	enum	value
heightUnits	unknown	0
	english	1
	metric	2

col_name	enum	value
state	All	-1
	Unknown	0
	Deleted	1
	New	2
	AwaitingReview	3
	AwaitingConfirm	4
	Confirmed	5
	Archived	6

col_name	enum	value
newState	Unknown	0
	Deleted	1
	New	2
	AwaitingReview	3
	AwaitingConfirm	4
	Confirmed	5
	Archived	6
	Unconfirmed	7
	NotConfirmed	8
	Other	9

col_name	enum	value
processType	ProcessAssembly	0
	ProcessDirectory	1
	ProcessQueue	2

col_name	enum	value
sourceID	All	-1
	Unknown	0
	PageWriter	1
	PageWriterXL	2
	PageWriterTouch	3
	PageWriterTrim	4
	HeartstartMRx	5
	Intellivue	6
	CMS	7
	S5600C	8
	M1729	9
	M1730	10
	M3700	11
	Other	12
	PhilipsHolter	13
	Telemetry	14
	StressVue	15
	OtherPhilipsCardiograph	16
	PhililpsDefibrillator	17
	PhilipsMonitor	18
	QStress	19
	XScribe	20
	PageWriterTC	21

col_name	enum	value
processForm	ProcessHPDT	0
	ProcessSierraXML	1
	ProcessViperXML	2

col_name	enum	value
inboxType	AwaitingReview	0
	AwaitingConfirmation	1

col_name	enum	value
ecgPriority	All	-1
	Unknown	0
	Normal	1
	Stat	3

col_name	enum	value
ecgSeverity	Unknown	-2
	All	-1
	No Severity	0
	Normal	1
	OtherwiseNormal	2
	Borderline	3
	Abnormal	4
	Defective	5

col_name	enum	value
ExportFormat	None	0
	PhilipsXml	1
	Fdaxml	2
	Pdf	3
	Svg	4
	tif	5

col_name	enum	value
clock	TwelveHour	0
	TwentyFourHour	1

col_name	enum	value
rhythmStripFormat	MatchOriginalReport	0
	OnePageFourChannel	1
	OnePageSixChannelR	2
	TwoPageThree Channel	3
	OnePageSixChannel	4

col_name	enum	value
reportType	Standard12Lead	0
	MorphologyAnalysis	1
	RhythmAnalysis	2
	SuperimposedBeat	3
	RepresentativeBeat	4
	SerialPresentation	5

col_name	enum	value
exportorientation	Landscape	0
	Portrait	1

col_name	enum	value
exportresolution	Onehundredbyone hundred	0
	Twohundredbytwo hundred	1
	Threehundredbythree hundred	2
	sixhundredbysixhundred	3

col_name	enum	value
exportcolordepth	TwentyFourBitColor	0
	Monochrome	1

col_name	enum	value
printSpeed	SpeedOfCurrent	0
	ForceAllTo25MMPerSec	1
	ForceAllTo50MMPerSec	2

col_name	enum	value
patientType	All	-1
	Unknown	0
	Neonatal	1
	Pediatric	2
	Adult	3

col_name	enum	value
reportSensitivity	Acquired	0
	Standard	1
	halfvoltleads	2

col_name	enum	value
units	Seconds	0
	Minutes	1
	Hours	2
	days	3

col_name	enum	value
exportTypes	Directory	0
	Queue	1

col_name	enum	value
ecgAction	All	-1
	None	0
	Assign	1
	Confirm	2
	Store	3
	Unconfirm	4
	Compare	5
	Delete	6
	Verify	7

col_name	enum	value
recordingSpeed	MatchOriginal Report	0
	TwentyFiveMM PerSec	1
	FiftyMMPerSec	2

col_name	enum	value
severityID	Unknown	0
	Normal	1
	OtherwiseNormal	2
	Borderline	3
	Abnormal	4
	Defective	5

col_name	enum	value
logType	Unknown	0
	Queuing	1
	Execution	2

col_name	enum	value
ecgSections		Bit positions represent which section of the XML document was changed.
	DocumentHeader	0x0001
	UserDefines	0x0002
	OrderInfo	0x0004
	DocumentInfo	0x0008
	ReportInfo	0x0010
	DataAcquisition	0x0020
	Patient	0x0040
	Measurements	0x0080
	Interpretations	0x0100
	Waveform	0x0200

col_name	enum	value
stmtType	CODED_STMT	0
	UNCODED_STMT	1
	REMARK_STMT	2

XML Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<!--Conforms to w3c http://www.w3.org/2001/XMLSchema-->
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www3.medical.philips.com" targetNamespace="http://www3.medical.philips.com" elementFormDefault="qualified">
      <xsd:annotation>
            <xsd:documentation xml:lang="en">

revision history:

      rev 1.03.3        Mar 30, 2006
            - increased character length of editingoperatorid from 32 to 64 so that ECGs
                  exported from TMVue will pass schema validation and can be re-imported into other systems
                  for testing and investigation of defects from the field


      rev 1.03.2        July 26, 2005
            - added support for new pyramid algorithm:
                  added measurement version 9 to list of valid enumerations


      rev 1.03.1        April 27, 2005
            - added filter settings for MRx defibrillator:
                  0.15 - 40 Hz
                  0.05 - 40 Hz


      rev. 1.03
            Sep. 22nd. 2003
            - add tag compareinfostatement under
                  /restingecgdata/interpretations/interpretation/serialcomparison/previousecg/


            July 29th. 2003
            - allow float values for amplitude gain and time gain
                   for example, allow 2.5mm/mv setting for amplitude gain


            July 21st. 2003
            - add valid lead names: X, Y, and Z
            - allow no groupmeasurement(usually when Renaissance given defective data)
            - add new type TYPEinteger to allow vector meas. to have invalid values(blank, Failed, etc...)
                  this is the case if the Philips 12-lead algorithm  encounters bad data
            - add optional reviewingclinician element under acquirer
            - add optional @printtruncationflag in reportformat to indicate
```

printing of truncated fields is requested

- change the ncolumn max from 5 to 12 to accomodate 1x12(PAN12) report

- add optional @machineid to the machine element(=Sierra/Viper deviceid)

- make @crc optional; if not there, don't enforce crc checking

- add drgcategory the same level as symptom, history etc...

- add optional global meas. qrs transversed vector

- add optional defaultage attribute to the age element

- add optional acsetting element under signalcharacteristics

- change STATflag attribute in orderinfo to priority

- correct an error in the userdefine minimum req.(from 1 to 0)

- add drgcategories element as parent of drgcategory element

- add code attribute to the drgcategory element

- make the id attribute of race, symptom, history, medication and diagnosis
    required

- make the code attribute of race, symptom, history, medication and diagnosis
     optional

- add attribute timesequence to waveformformat element
    the possible value for timesequence is Continous or Simultaneous

- make previousecg element optional

- add date and time attribute to the previousecg element

- add crc attribute to root element restingecgdata
    will compute crc from documentinfo to the end of the file

- add new values to TYPEstatementsource

- change previousecgs to previousecg

- add status attribute to previousecg element

- add element severity to previousecg element

- add subtype attribute to codedstatement

- add subtype attribute to qualitystatement

- add new type TYPEstatementsubtype

- rename compareinfostatement to mdsignatureline

- delete elements under interpretationdatastructure except statementcomponents

- add/modify machine element possible values

- add attribute detaildescription for machine element; will be used to store
    machine information such as software revision, and so on...
    the current convention is :
        MFG:MODEL:SW_REV(: separated values)

rev. 1.02   Nov. 25th. 2002
    - add Unknown value to gender element
    - allow multiple words for race element
    - add pacestatus element to indicate the patient pace state

- modify serial comparison tags per recommendation from Leigh Wells

- for age only allows 1 type of entry: dob or years or months or weeks etc...

- add fiducial attributes for the rep beat waveforms

- add more possible values to the pace status, pace misc. and pace modes

- add optional extended measurement flag in the report info

- add optional unique database id for Viper database

- add optional filterflag to the parsedwaveform

- add optional lead names with active pace detections

- add optional pace amplitude value attributes

rev. 1.01   June 10th. 2002
- add new element compareinfostatement

- add new attrib criteriaversionforpatientdata

- patientid element cannot be null; has to contain between 1 and 40 chars inclusive

- add optional id attrib to race, severity, ecg_severity, symptom, history,
        diagnosis and medication

- simplify the elements in interpretationdatastructure; also add code and id attrib
        to the elements

- add new enum values to TYPEcriteriaversion: V8, None and Unknown

- remove 1 enum value from TYPEcriteriaversion: P1

rev. 1.00   May 23rd. 2002
- Draft to Release status

</xsd:documentation>
</xsd:annotation>
<xsd:include schemaLocation="SierraECGExtendedType.xsd"/>
<xsd:group name="leadmeasurement.elements">
        <xsd:sequence>
                <xsd:element ref="leadqualitystates"/>
                <xsd:element ref="pamp"/>
                <xsd:element ref="pdur"/>
                <xsd:element ref="parea"/>
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                <xsd:element ref="pparea"/>
                <xsd:element ref="pppparea"/>
                <xsd:element ref="qamp"/>
                <xsd:element ref="qdur"/>
                <xsd:element ref="ramp"/>

```xml
            <xsd:element ref="rdur"/>
            <xsd:element ref="samp"/>
            <xsd:element ref="sdur"/>
            <xsd:element ref="rpamp"/>
            <xsd:element ref="rpdur"/>
            <xsd:element ref="spamp"/>
            <xsd:element ref="spdur"/>
            <xsd:element ref="vat"/>
            <xsd:element ref="qrsppk"/>
            <xsd:element ref="qrsdur"/>
            <xsd:element ref="qrsarea"/>
            <xsd:element ref="ston"/>
            <xsd:element ref="stmid"/>
            <xsd:element ref="st80"/>
            <xsd:element ref="stend"/>
            <xsd:element ref="stdur"/>
            <xsd:element ref="stslope"/>
            <xsd:element ref="stshape"/>
            <xsd:element ref="tamp"/>
            <xsd:element ref="tdur"/>
            <xsd:element ref="tarea"/>
            <xsd:element ref="tpamp"/>
            <xsd:element ref="tptpdur"/>
            <xsd:element ref="tpdur"/>
            <xsd:element ref="tparea"/>
            <xsd:element ref="tptparea"/>
            <xsd:element ref="print"/>
            <xsd:element ref="prseg"/>
            <xsd:element ref="qtint"/>
        </xsd:sequence>
    </xsd:group>
```

```xml
<xsd:group name="groupmeasurement.elements">
        <xsd:sequence>
                <xsd:element ref="membercount"/>
                <xsd:element ref="memberpercent"/>
                <xsd:element ref="longestrun"/>
                <xsd:element ref="meanqrsdur"/>
                <xsd:element ref="lowventrate"/>
                <xsd:element ref="meanventrate"/>
                <xsd:element ref="highventrate"/>
                <xsd:element ref="ventratestddev"/>
                <xsd:element ref="meanrrint"/>
                <xsd:element ref="atrialrate"/>
                <xsd:element ref="atrialratestddev"/>
                <xsd:element ref="avgpcount"/>
                <xsd:element ref="notavgpbeats"/>
                <xsd:element ref="lowprint"/>
                <xsd:element ref="meanprint"/>
                <xsd:element ref="highprint"/>
                <xsd:element ref="printstddev"/>
                <xsd:element ref="meanprseg"/>
                <xsd:element ref="meanqtint"/>
                <xsd:element ref="meanqtseg"/>
                <xsd:element ref="comppausecount"/>
                <xsd:element ref="groupreserved"/>
        </xsd:sequence>
</xsd:group>
<xsd:group name="globalmeasurements.elements">
        <xsd:sequence>
                <xsd:element ref="pacedetectleads" minOccurs="0"/>
                <xsd:element ref="pacepulses"/>
                <xsd:element ref="pacemodes"/>
                <xsd:element ref="pacemalf"/>
                <xsd:element ref="pacemisc"/>
                <xsd:element ref="ectopicrhythm"/>
                <xsd:element ref="qtintdispersion"/>
                <xsd:element ref="numberofcomplexes"/>
                <xsd:element ref="numberofgroups"/>
                <xsd:element ref="beatclassification"/>
                <xsd:element ref="qamessagecodes"/>
                <xsd:element ref="qaactioncode"/>
                <xsd:element ref="pon"/>
```

```xml
<xsd:element ref="qrson"/>
<xsd:element ref="qrsoff"/>
<xsd:element ref="ton"/>
<xsd:element ref="toff"/>
<xsd:element ref="pfrontaxis"/>
<xsd:element ref="phorizaxis"/>
<xsd:element ref="i40frontaxis"/>
<xsd:element ref="i40horizaxis"/>
<xsd:element ref="qrsfrontaxis"/>
<xsd:element ref="qrshorizaxis"/>
<xsd:element ref="t40frontaxis"/>
<xsd:element ref="t40horizaxis"/>
<xsd:element ref="stfrontaxis"/>
<xsd:element ref="sthorizaxis"/>
<xsd:element ref="tfrontaxis"/>
<xsd:element ref="thorizaxis"/>
<xsd:element ref="atrialrate"/>
<xsd:element ref="lowventrate"/>
<xsd:element ref="meanventrate"/>
<xsd:element ref="highventrate"/>
<xsd:element ref="meanprint"/>
<xsd:element ref="meanprseg"/>
<xsd:element ref="meanqrsdur"/>
<xsd:element ref="meanqtint"/>
<xsd:element ref="meanqtc"/>
<xsd:element ref="deltawavecount"/>
<xsd:element ref="deltawavepercent"/>
<xsd:element ref="bigeminycount"/>
<xsd:element ref="bigeminystring"/>
<xsd:element ref="trigeminycount"/>
<xsd:element ref="trigeminystring"/>
<xsd:element ref="wenckcount"/>
<xsd:element ref="wenckstring"/>
<xsd:element ref="flutterfibcount"/>
<xsd:element ref="qrsinitangle" minOccurs="0"/>
<xsd:element ref="qrsinitmag" minOccurs="0"/>
<xsd:element ref="qrsmaxangle" minOccurs="0"/>
<xsd:element ref="qrsmaxmag" minOccurs="0"/>
<xsd:element ref="qrstermangle" minOccurs="0"/>
<xsd:element ref="qrstermmag" minOccurs="0"/>
<xsd:element ref="qrsrotation" minOccurs="0"/>
```

```
                        <xsd:element ref="globalreserved"/>

                </xsd:sequence>

        </xsd:group>

<!--Conforms to w3c http://www.w3.org/2001/XMLSchema-->

<xsd:element name="restingecgdata">

        <xsd:complexType>

                <xsd:sequence>

                        <xsd:element ref="documentinfo"/>

                        <xsd:element ref="userdefines" minOccurs="0"/>

                        <xsd:element ref="orderinfo" minOccurs="0"/>

                        <xsd:element ref="reportinfo"/>

                        <xsd:element ref="dataacquisition"/>

                        <xsd:element ref="patient"/>

                        <xsd:element ref="measurements" minOccurs="0"/>

                        <xsd:element ref="interpretations" minOccurs="0"/>

                        <xsd:element ref="waveforms" minOccurs="0"/>

                </xsd:sequence>

                <xsd:attribute name="crc" type="xsd:string" use="optional"/>

                <xsd:attribute name="status" type="TYPErestingecgstatus" use="required"/>

                <xsd:attribute name="lang" type="xsd:language" use="required"/>

                <xsd:attribute name="locale" type="xsd:language" use="optional"/>

        </xsd:complexType>

</xsd:element>
```

```xml
<xsd:element name="documentinfo">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="documentname"/>
                        <xsd:element ref="documenttype"/>
                        <xsd:element ref="documentversion"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="documentname">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:length value="40"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="documenttype" type="TYPEschemaname"/>
<xsd:element name="documentversion" type="TYPEschemaversion"/>
<xsd:element name="userdefines">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="userdefine" minOccurs="0" maxOccurs="8"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="userdefine">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="label"/>
                        <xsd:element ref="value"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="label">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="32"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
```

```xml
<xsd:element name="value">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="32"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>

<xsd:element name="dataacquisition">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="emsdatabaseid" type="xsd:string" minOccurs="0"/>
                        <xsd:element ref="machine"/>
                        <xsd:element ref="acquirer"/>
                        <xsd:element ref="signalcharacteristics"/>
                </xsd:sequence>
                <xsd:attribute name="date" type="xsd:date" use="required"/>
                <xsd:attribute name="time" type="xsd:time" use="required"/>
                <xsd:attribute name="statflag" type="TYPEflag" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="machine">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEmachine">
                                <xsd:attribute name="machineid" type="xsd:string" use="optional"/>
                                <xsd:attribute name="detaildescription" type="xsd:string" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="acquirer">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="encounterid" minOccurs="0"/>
                        <xsd:element ref="operatorid"/>
                        <xsd:element ref="editingoperatorid" minOccurs="0"/>
                        <xsd:element ref="room" minOccurs="0"/>
                        <xsd:element ref="departmentid" minOccurs="0"/>
                        <xsd:element ref="departmentname" minOccurs="0"/>
                        <xsd:element ref="institutionid" minOccurs="0"/>
                        <xsd:element ref="institutionname" minOccurs="0"/>
                        <xsd:element ref="institutionlocationid" minOccurs="0"/>
                        <xsd:element ref="institutionlocationname" minOccurs="0"/>
                        <xsd:element ref="orderingclinicianname" minOccurs="0"/>
                        <xsd:element ref="orderingclinicianUPIN" minOccurs="0"/>
                        <xsd:element ref="reviewingclinician" minOccurs="0"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="signalcharacteristics">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="samplingrate"/>
                        <xsd:element ref="signalresolution"/>
                        <xsd:element ref="signalbandwidth"/>
                        <xsd:element ref="acsetting" minOccurs="0"/>
                        <xsd:element ref="acquisitiontype"/>
                        <xsd:element ref="bitspersample"/>
                        <xsd:element ref="signaloffset"/>
                        <xsd:element ref="signalsigned"/>
                        <xsd:element ref="numberchannelsallocated"/>
                        <xsd:element ref="numberchannelsvalid"/>
                        <xsd:element ref="leadset"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="patient">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="generalpatientdata"/>
                        <xsd:element ref="patientmedicaldata" minOccurs="0"/>
                </xsd:sequence>
                <xsd:attribute name="criteriaversionforpatientdata" type="TYPEcriteriaversion" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="generalpatientdata">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="patientid"/>
                        <xsd:element ref="viperuniquepatientid" minOccurs="0"/>
                        <xsd:element ref="name"/>
                        <xsd:element ref="age"/>
                        <xsd:element name="pacestatus" type="TYPEpacestatus"/>
                        <xsd:element ref="sex"/>
                        <xsd:element ref="race" minOccurs="0"/>
                        <xsd:element ref="height" minOccurs="0"/>
                        <xsd:element ref="weight" minOccurs="0"/>
                </xsd:sequence>
        </xsd:complexType>
```

```
</xsd:element>
<xsd:element name="patientmedicaldata">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="bloodpressure" minOccurs="0"/>
                        <xsd:element ref="symptom" minOccurs="0" maxOccurs="4"/>
                        <xsd:element ref="history" minOccurs="0" maxOccurs="4"/>
                        <xsd:element ref="diagnosis" minOccurs="0" maxOccurs="4"/>
                        <xsd:element ref="medication" minOccurs="0" maxOccurs="4"/>
                        <xsd:element ref="drgcategory" minOccurs="0" maxOccurs="4"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>

<xsd:element name="measurements">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="globalmeasurements"/>
                        <xsd:element ref="groupmeasurements"/>
                        <xsd:element ref="leadmeasurements"/>
                </xsd:sequence>
                <xsd:attribute name="date" type="xsd:date" use="required"/>
                <xsd:attribute name="time" type="xsd:time" use="required"/>
                <xsd:attribute name="measurementversion" type="TYPEmeasurementversion" use="required"/>
                <xsd:attribute name="custommeasurementversion" type="TYPEcustommeasurementversion" use="optional"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="globalmeasurements">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:group ref="globalmeasurements.elements"/>
                </xsd:sequence>
                <xsd:attribute name="fixedmultpflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="multptestvalidflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="qrslikeartfflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="pacebeatmeasflag" type="TYPEflag" use="required"/>
        </xsd:complexType>
```

```
</xsd:element>
<xsd:element name="groupmeasurements">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="groupmeasurement" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>


<xsd:element name="groupmeasurement">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:group ref="groupmeasurement.elements"/>
                </xsd:sequence>
                <xsd:attribute name="groupnumber" use="required">
                        <xsd:simpleType>
                                <xsd:restriction base="xsd:nonNegativeInteger">
                                        <xsd:maxInclusive value="20"/>
                                        <xsd:minInclusive value="0"/>
                                </xsd:restriction>
                        </xsd:simpleType>
                </xsd:attribute>
                <xsd:attribute name="interpflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="sinusflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="prprogflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="wenckflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="bigflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="trigflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="aberrantflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="multptestflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="qrsmeasflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="atrialpaceflag" type="TYPEflag3" use="required"/>
                <xsd:attribute name="ventdualpaceflag" type="TYPEflag" use="required"/>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="leadmeasurements">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="leadmeasurement" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>


<xsd:element name="leadmeasurement">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="pacepulses" minOccurs="0"/>
                        <xsd:group ref="leadmeasurement.elements"/>
                </xsd:sequence>
                <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
                <xsd:attribute name="pexistflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="pmeasflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="pnotchflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="qrsexistflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="qrsspikeflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="qrsmeasflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="qrsnotchflag" type="TYPEflag2" use="required"/>
                <xsd:attribute name="qrsdeltaflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="stexistflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="stmeasflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="texistflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="tmeasflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="tnotchflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="atrialpaceflag" type="TYPEflag3" use="required"/>
                <xsd:attribute name="ventpaceflag" type="TYPEflag" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="interpretations">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="interpretation" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="interpretation">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="serialcomparison" minOccurs="0"/>
                        <xsd:element ref="interpretationdatastructure"/>
                        <xsd:element ref="interpretationmeasurements"/>
                        <xsd:element ref="mdsignatureline"/>
                        <xsd:element ref="severity"/>
                        <xsd:element ref="statement" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="date" type="xsd:date" use="required"/>
                <xsd:attribute name="time" type="xsd:time" use="required"/>
                <xsd:attribute name="criteriaversion" type="TYPEcriteriaversion" use="required"/>
                <xsd:attribute name="criteriaversiondate" type="xsd:date" use="required"/>
                <xsd:attribute name="customcriteriaversion" type="TYPEcustomcriteriaversion"/>
        </xsd:complexType>
</xsd:element>

<xsd:element name="waveforms">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="parsedwaveforms" minOccurs="0"/>
                        <xsd:element ref="unparsedwaveforms" minOccurs="0"/>
                        <xsd:element ref="leadwaveforms" minOccurs="0"/>
                        <xsd:element ref="vcgs" minOccurs="0"/>
                        <xsd:element ref="repbeats" minOccurs="0"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="parsedwaveforms">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="compressflag" type="TYPEflag" use="required"/>
                                <xsd:attribute name="compressmethod" type="TYPEcompress" use="required"/>
                                <xsd:attribute name="filterflag" type="TYPEflag" default="False"/>
                                <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
                                <xsd:attribute name="durationperchannel" type="TYPEduration" use="required"/>
                                <xsd:attribute name="nbitspersample" type="TYPEnbitspersample" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="unparsedwaveforms">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="href" type="xsd:string" use="required"/>
                                <xsd:attribute name="compressflag" type="TYPEflag" use="required"/>
                                <xsd:attribute name="compressmethod" type="TYPEcompress" use="required"/>
                                <xsd:attribute name="durationperchannel" type="TYPEduration" use="required"/>
                                <xsd:attribute name="nbitspersample" type="TYPEnbitspersample" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="leadwaveforms">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="leadwaveform" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="leadwaveform">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
                                <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="repbeats">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="repbeat" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="repbeat">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
                                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                                <xsd:attribute name="ponset" type="TYPEfiducial" use="required"/>
                                <xsd:attribute name="pend" type="TYPEfiducial" use="required"/>
                                <xsd:attribute name="qonset" type="TYPEfiducial" use="required"/>
                                <xsd:attribute name="qend" type="TYPEfiducial" use="required"/>
                                <xsd:attribute name="tonset" type="TYPEfiducial" use="required"/>
                                <xsd:attribute name="tend" type="TYPEfiducial" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="vcgs">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="vcg" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="vcg">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="vcgname" type="TYPEvcgname" use="required"/>
                                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="samplingrate" type="TYPEsamplingrate"/>
<xsd:element name="signalresolution" type="TYPEsignalresolution"/>
<xsd:element name="signalbandwidth" type="TYPEsignalbandwidth"/>
<xsd:element name="acsetting" type="TYPEacsetting"/>
<xsd:element name="acquisitiontype" type="TYPEacquisitiontype"/>
<xsd:element name="bitspersample" type="TYPEnbitspersample"/>
<xsd:element name="signaloffset" type="xsd:string"/>
<xsd:element name="signalsigned" type="TYPEflag"/>
<xsd:element name="numberchannelsallocated" type="xsd:string"/>
<xsd:element name="numberchannelsvalid" type="xsd:string"/>
<xsd:element name="leadset" type="TYPEleadset"/>
<xsd:element name="patientid">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:minLength value="1"/>
                        <xsd:maxLength value="40"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="viperuniquepatientid" type="xsd:string"/>
```

```
<xsd:element name="name">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="lastname" minOccurs="0"/>
                        <xsd:element ref="firstname" minOccurs="0"/>
                        <xsd:element ref="middlename" minOccurs="0"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="lastname">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="40"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="firstname">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="40"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="middlename">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="40"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
```

```
<xsd:element name="age">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:choice>
                                <xsd:element ref="dateofbirth" minOccurs="0"/>
                                <xsd:element ref="years" minOccurs="0"/>
                                <xsd:element ref="months" minOccurs="0"/>
                                <xsd:element ref="weeks" minOccurs="0"/>
                                <xsd:element ref="days" minOccurs="0"/>
                                <xsd:element ref="hours" minOccurs="0"/>
                                <xsd:element ref="minutes" minOccurs="0"/>
                        </xsd:choice>
                </xsd:sequence>
                <xsd:attribute name="defaultage" type="TYPEageyears" use="optional"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="dateofbirth" type="TYPEdate"/>
<xsd:element name="years" type="TYPEageyears"/>
<xsd:element name="months" type="xsd:positiveInteger"/>
<xsd:element name="weeks" type="xsd:positiveInteger"/>
<xsd:element name="days" type="xsd:positiveInteger"/>
<xsd:element name="hours" type="xsd:positiveInteger"/>
<xsd:element name="minutes" type="xsd:positiveInteger"/>
<xsd:element name="sex" type="TYPEsex"/>
<xsd:element name="race">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:NMTOKENS" use="optional"/>
                                <xsd:attribute name="id" type="xsd:NMTOKENS" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="height">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:choice>
                                <xsd:element name="cm" type="TYPEheight"/>
                                <xsd:element name="inch" type="TYPEheight"/>
                        </xsd:choice>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="weight">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:choice>
                                <xsd:element name="kg" type="TYPEweight"/>
                                <xsd:element name="lb" type="TYPEweight"/>
                        </xsd:choice>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="bloodpressure">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="systolic"/>
                        <xsd:element ref="diastolic"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="systolic">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="mmHg" type="TYPEbp"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="diastolic">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="mmHg" type="TYPEbp"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="symptom">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                                <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
                                <xsd:attribute name="value" type="xsd:string"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="history">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                                <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
                                <xsd:attribute name="value" type="xsd:string"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="diagnosis">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                                <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
                                <xsd:attribute name="value" type="xsd:string"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="medication">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                                <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
                                <xsd:attribute name="value" type="xsd:string"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="operatorid">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="32"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="editingoperatorid">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="64"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="room">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="32"/>
```

```
                </xsd:restriction>

            </xsd:simpleType>

    </xsd:element>

    <xsd:element name="departmentid">

            <xsd:simpleType>

                    <xsd:restriction base="xsd:string">

                            <xsd:maxLength value="32"/>

                    </xsd:restriction>

            </xsd:simpleType>

    </xsd:element>


    <xsd:element name="departmentname">

            <xsd:simpleType>

                    <xsd:restriction base="xsd:string">

                            <xsd:maxLength value="32"/>

                    </xsd:restriction>

            </xsd:simpleType>

    </xsd:element>

    <xsd:element name="institutionid">

            <xsd:simpleType>

                    <xsd:restriction base="xsd:string">

                            <xsd:maxLength value="32"/>

                    </xsd:restriction>

            </xsd:simpleType>

    </xsd:element>

    <xsd:element name="institutionname">

            <xsd:simpleType>

                    <xsd:restriction base="xsd:string">

                            <xsd:maxLength value="32"/>

                    </xsd:restriction>

            </xsd:simpleType>

    </xsd:element>

    <xsd:element name="institutionlocationid">

            <xsd:simpleType>

                    <xsd:restriction base="xsd:string">

                            <xsd:maxLength value="32"/>

                    </xsd:restriction>

            </xsd:simpleType>

    </xsd:element>
```

```
<xsd:element name="institutionlocationname">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="32"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>


<xsd:element name="serialcomparison">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="previousecg" minOccurs="0">
                                <xsd:complexType>
                                        <xsd:sequence>
                                                <xsd:element ref="documentname"/>
                                                <xsd:element ref="severity"/>
                                                <xsd:element name="mdsignatureline" type="xsd:string"/>
                                                <xsd:element name="compareinfostatement" type="xsd:string"/>
                                        </xsd:sequence>
                                        <xsd:attribute name="date" type="xsd:date" use="required"/>
                                        <xsd:attribute name="time" type="xsd:time" use="required"/>
                                        <xsd:attribute name="status" type="TYPErestingecgstatus" use="required"/>
                                </xsd:complexType>
                        </xsd:element>
                </xsd:sequence>
                <xsd:attribute name="date" type="xsd:date" use="required"/>
                <xsd:attribute name="time" type="xsd:time" use="required"/>
                <xsd:attribute name="scalgversion" type="xsd:string" use="required"/>
                <xsd:attribute name="scalgversiondate" type="xsd:date"/>
                <xsd:attribute name="scstatementversion" type="xsd:string"/>
                <xsd:attribute name="scstatementversiondate" type="xsd:date"/>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="pt_race">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:NMTOKENS" use="optional"/>
                                <xsd:attribute name="id" type="xsd:NMTOKENS" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="dx">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:NMTOKEN" use="required"/>
                                <xsd:attribute name="id" type="xsd:NMTOKEN" use="optional"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="rx">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:NMTOKEN" use="required"/>
                                <xsd:attribute name="id" type="xsd:NMTOKEN" use="optional"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="ecg_severity">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:NMTOKEN" use="required"/>
                                <xsd:attribute name="id" type="xsd:NMTOKEN" use="optional"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="interpretationdatastructure">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="statementcomponents" minOccurs="0"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="modifiers">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="modifier" minOccurs="0" maxOccurs="3">
                                <xsd:complexType>
                                        <xsd:simpleContent>
                                                <xsd:extension base="xsd:string">
                                                        <xsd:attribute name="numericcode" type="xsd:nonNegativeInteger" use="required"/>
                                                        <xsd:attribute name="modifiercode" type="xsd:string" use="required"/>
                                                        <xsd:attribute name="added" type="TYPEflag"/>
                                                        <xsd:attribute name="deleted" type="TYPEflag"/>
                                                </xsd:extension>
                                        </xsd:simpleContent>
                                </xsd:complexType>
                        </xsd:element>
                </xsd:sequence>
                <xsd:attribute name="changed" type="TYPEflag" default="False"/>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="scmodifiers">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="scmodifier" minOccurs="0">
                                <xsd:complexType>
                                        <xsd:simpleContent>
                                                <xsd:extension base="xsd:string">
                                                        <xsd:attribute name="scnumericcode" type="xsd:nonNegativeInteger" use="required"/>
                                                        <xsd:attribute name="scmodifiercode" type="xsd:string" use="required"/>
                                                        <xsd:attribute name="added" type="TYPEflag"/>
                                                        <xsd:attribute name="deleted" type="TYPEflag"/>
                                                </xsd:extension>
                                        </xsd:simpleContent>
                                </xsd:complexType>
                        </xsd:element>
                </xsd:sequence>
                <xsd:attribute name="changed" type="TYPEflag" default="False"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="numericvalue">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="changed" type="TYPEflag" default="False"/>
                                <xsd:attribute name="ndigits" type="xsd:nonNegativeInteger" use="required"/>
                                <xsd:attribute name="nprecision" type="xsd:nonNegativeInteger" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="listofECGlead">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPElistofleadname">
                                <xsd:attribute name="changed" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="groupofECGlead">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPElistofleadname">
                                <xsd:attribute name="changed" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="variables">
        <xsd:complexType>
                <xsd:sequence minOccurs="0" maxOccurs="4">
                        <xsd:choice>
                                <xsd:element ref="numericvalue"/>
                                <xsd:element ref="listofECGlead"/>
                                <xsd:element ref="groupofECGlead"/>
                        </xsd:choice>
                </xsd:sequence>
                <xsd:attribute name="changed" type="TYPEflag" default="False"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="unparsedstatement">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="lhsstatement" type="xsd:string"/>
                        <xsd:element name="rhsstatement" type="xsd:string"/>
                </xsd:sequence>
                <xsd:attribute name="statementnumber" type="xsd:nonNegativeInteger" use="required"/>
                <xsd:attribute name="code" type="xsd:string" use="required"/>
                <xsd:attribute name="format" type="TYPEformat" use="required"/>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="codedstatement">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="modifiers"/>
                        <xsd:element ref="scmodifiers"/>
                        <xsd:element ref="variables"/>
                        <xsd:element ref="unparsedstatement"/>
                </xsd:sequence>
                <xsd:attribute name="source" type="TYPEcodedstatementsource" use="required"/>
                <xsd:attribute name="subtype" type="TYPEstatementsubtype" use="required"/>
                <xsd:attribute name="deleted" type="TYPEflag" default="False"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="uncodedstatement">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="source" type="TYPEuncodedstatementsource" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="qualitystatement">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="modifiers"/>
                        <xsd:element ref="variables"/>
                        <xsd:element ref="unparsedstatement"/>
                </xsd:sequence>
                <xsd:attribute name="source" type="TYPEqualitystatementsource" use="required"/>
                <xsd:attribute name="subtype" type="TYPEstatementsubtype" use="required"/>
                <xsd:attribute name="deleted" type="TYPEflag" default="False"/>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="remarkstatement">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="source" type="TYPEremarkstatementsource" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="statementcomponents">
        <xsd:complexType>
                <xsd:sequence minOccurs="0" maxOccurs="unbounded">
                        <xsd:choice>
                                <xsd:element ref="codedstatement"/>
                                <xsd:element ref="uncodedstatement"/>
                                <xsd:element ref="qualitystatement"/>
                                <xsd:element ref="remarkstatement"/>
                        </xsd:choice>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="mdsignatureline" type="xsd:string"/>
<xsd:element name="severity">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="code" type="xsd:string" use="required"/>
                                <xsd:attribute name="id" type="xsd:nonNegativeInteger" use="optional"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="interpretationmeasurements">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="heartrate">
                                <xsd:complexType>
                                        <xsd:simpleContent>
                                                <xsd:extension base="TYPErate">
                                                        <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                                                </xsd:extension>
                                        </xsd:simpleContent>
                                </xsd:complexType>
                        </xsd:element>
                        <xsd:element name="meanprint">
                                <xsd:complexType>
                                        <xsd:simpleContent>
                                                <xsd:extension base="TYPEduration">
                                                        <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                                                </xsd:extension>
                                        </xsd:simpleContent>
                                </xsd:complexType>
                        </xsd:element>
                        <xsd:element name="meanqrsdur">
                                <xsd:complexType>
                                        <xsd:simpleContent>
                                                <xsd:extension base="TYPEduration">
                                                        <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                                                </xsd:extension>
                                        </xsd:simpleContent>
                                </xsd:complexType>
                        </xsd:element>
                        <xsd:element name="meanqtint">
                                <xsd:complexType>
                                        <xsd:simpleContent>
                                                <xsd:extension base="TYPEduration">
                                                        <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                                                </xsd:extension>
                                        </xsd:simpleContent>
                                </xsd:complexType>
                        </xsd:element>
```

```
<xsd:element name="meanqtc">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEduration">
                                <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="pfrontaxis">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                                <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="i40frontaxis">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                                <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="t40frontaxis">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                                <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="qrsfrontaxis">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
```

```xml
                                        <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                                </xsd:extension>
                        </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="stfrontaxis">
                <xsd:complexType>
                        <xsd:simpleContent>
                                <xsd:extension base="TYPEaxis">
                                        <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                                </xsd:extension>
                        </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="tfrontaxis">
                <xsd:complexType>
                        <xsd:simpleContent>
                                <xsd:extension base="TYPEaxis">
                                        <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                                </xsd:extension>
                        </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="phorizaxis">
                <xsd:complexType>
                        <xsd:simpleContent>
                                <xsd:extension base="TYPEaxis">
                                        <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                                </xsd:extension>
                        </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="i40horizaxis">
                <xsd:complexType>
                        <xsd:simpleContent>
                                <xsd:extension base="TYPEaxis">
                                        <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                                </xsd:extension>
                        </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
```

```xml
<xsd:element name="t40horizaxis">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                                <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="qrshorizaxis">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                                <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="sthorizaxis">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                                <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="thorizaxis">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                                <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
        </xsd:sequence>
        <xsd:attribute name="arrhyflag" type="TYPEflag" use="required"/>
        <xsd:attribute name="editedflag" type="TYPEflag" use="required"/>
</xsd:complexType>
</xsd:element>
```

```
<xsd:element name="statement">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="statementcode"/>
                        <xsd:element ref="leftstatement"/>
                        <xsd:element ref="rightstatement"/>
                </xsd:sequence>
                <xsd:attribute name="editedflag" type="TYPEflag" default="False"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="statementcode" type="xsd:string"/>
<xsd:element name="leftstatement" type="xsd:string"/>
<xsd:element name="rightstatement" type="xsd:string"/>
<xsd:element name="leadqualitystates">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="inops" minOccurs="0" maxOccurs="unbounded"/>
                        <xsd:element ref="saturations" minOccurs="0" maxOccurs="unbounded"/>
                        <xsd:element ref="baseartifacts" minOccurs="0" maxOccurs="unbounded"/>
                        <xsd:element ref="acartifacts" minOccurs="0" maxOccurs="unbounded"/>
                        <xsd:element ref="muscleartifacts" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="qrsclippingflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="overrangeflag" type="TYPEflag" use="required"/>
                <xsd:attribute name="measuredflag" type="TYPEflag" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="inops">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="inop" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="saturations">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="saturation" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="baseartifacts">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="baseartifact" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="acartifacts">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="acartifact" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="muscleartifacts">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="muscleartifact" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="inop">
        <xsd:complexType>
                <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="saturation">
        <xsd:complexType>
                <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="baseartifact">
        <xsd:complexType>
                <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
```

```
                </xsd:complexType>
        </xsd:element>


        <xsd:element name="acartifact">
                <xsd:complexType>
                        <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                        <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                        <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="muscleartifact">
                <xsd:complexType>
                        <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                        <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                        <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="pamp" type="TYPEamplitude"/>
        <xsd:element name="pdur" type="TYPEduration"/>
        <xsd:element name="parea" type="TYPEarea"/>
        <xsd:element name="ppamp" type="TYPEamplitude"/>
        <xsd:element name="ppdur" type="TYPEduration"/>
        <xsd:element name="ppppdur" type="TYPEduration"/>
        <xsd:element name="pparea" type="TYPEarea"/>
        <xsd:element name="pppparea" type="TYPEarea"/>
        <xsd:element name="qamp" type="TYPEamplitude"/>
        <xsd:element name="qdur" type="TYPEduration"/>
        <xsd:element name="ramp" type="TYPEamplitude"/>
        <xsd:element name="rdur" type="TYPEduration"/>
        <xsd:element name="samp" type="TYPEamplitude"/>
        <xsd:element name="sdur" type="TYPEduration"/>
        <xsd:element name="rpamp" type="TYPEamplitude"/>
        <xsd:element name="rpdur" type="TYPEduration"/>
        <xsd:element name="spamp" type="TYPEamplitude"/>
        <xsd:element name="spdur" type="TYPEduration"/>
        <xsd:element name="vat" type="TYPEstarttime"/>
        <xsd:element name="qrsppk" type="TYPEpeaktopeak"/>
        <xsd:element name="qrsdur" type="TYPEduration"/>
        <xsd:element name="qrsarea" type="TYPEarea"/>
        <xsd:element name="ston" type="TYPEamplitude"/>
        <xsd:element name="stmid" type="TYPEamplitude"/>
```

```xml
<xsd:element name="st80" type="TYPEamplitude"/>
<xsd:element name="stend" type="TYPEamplitude"/>
<xsd:element name="stdur" type="TYPEduration"/>
<xsd:element name="stslope" type="TYPEstslope"/>
<xsd:element name="stshape" type="TYPEstshape"/>
<xsd:element name="tamp" type="TYPEamplitude"/>
<xsd:element name="tdur" type="TYPEduration"/>
<xsd:element name="tarea" type="TYPEarea"/>
<xsd:element name="tpamp" type="TYPEamplitude"/>
<xsd:element name="tptpdur" type="TYPEduration"/>
<xsd:element name="tpdur" type="TYPEduration"/>
<xsd:element name="tparea" type="TYPEarea"/>
<xsd:element name="tptparea" type="TYPEarea"/>
<xsd:element name="print" type="TYPEduration"/>
<xsd:element name="prseg" type="TYPEduration"/>
<xsd:element name="qtint" type="TYPEduration"/>
<xsd:element name="pacedetectleads" type="TYPElistofrhythmlead"/>
<xsd:element name="pacepulses">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="pacepulse" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="pacepulse">
        <xsd:complexType>
                <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                <xsd:attribute name="duration" type="TYPEduration" use="optional"/>
                <xsd:attribute name="upswingamp" type="xsd:nonNegativeInteger" use="optional"/>
                <xsd:attribute name="downswingamp" type="xsd:nonNegativeInteger" use="optional"/>
                <xsd:attribute name="paceamptype" type="TYPEpaceamptype" use="optional"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="pacemodes">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="pacemode" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="pacemode" type="TYPEpacemode"/>
<xsd:element name="pacemalf" type="TYPEpacemalf"/>
<xsd:element name="pacemisc" type="TYPEpacemisc"/>
<xsd:element name="ectopicrhythm" type="TYPEectopicrhythm"/>
<xsd:element name="qtintdispersion" type="TYPEduration"/>
<xsd:element name="numberofcomplexes" type="TYPEcount"/>
<xsd:element name="numberofgroups" type="TYPEcount"/>
<xsd:element name="beatclassification" type="TYPElistofgroupnumber"/>
<xsd:element name="qamessagecodes">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="qamessagecode" minOccurs="0" maxOccurs="4"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="qamessagecode" type="TYPEmessagecode"/>
<xsd:element name="qaactioncode" type="TYPEactioncode"/>
<xsd:element name="pon" type="TYPEstarttime"/>
<xsd:element name="qrson" type="TYPEstarttime"/>
<xsd:element name="qrsoff" type="TYPEstarttime"/>
<xsd:element name="ton" type="TYPEstarttime"/>
<xsd:element name="toff" type="TYPEstarttime"/>
<xsd:element name="pfrontaxis" type="TYPEaxis"/>
<xsd:element name="phorizaxis" type="TYPEaxis"/>
<xsd:element name="i40frontaxis" type="TYPEaxis"/>
<xsd:element name="i40horizaxis" type="TYPEaxis"/>
<xsd:element name="qrsfrontaxis" type="TYPEaxis"/>
<xsd:element name="qrshorizaxis" type="TYPEaxis"/>
<xsd:element name="t40frontaxis" type="TYPEaxis"/>
<xsd:element name="t40horizaxis" type="TYPEaxis"/>
<xsd:element name="stfrontaxis" type="TYPEaxis"/>
<xsd:element name="sthorizaxis" type="TYPEaxis"/>
<xsd:element name="tfrontaxis" type="TYPEaxis"/>
<xsd:element name="thorizaxis" type="TYPEaxis"/>
<xsd:element name="atrialrate" type="TYPErate"/>
<xsd:element name="heartrate" type="TYPErate"/>
<xsd:element name="lowventrate" type="TYPErate"/>
<xsd:element name="meanventrate" type="TYPErate"/>
<xsd:element name="highventrate" type="TYPErate"/>
<xsd:element name="meanprint" type="TYPEduration"/>
<xsd:element name="meanprseg" type="TYPEduration"/>
```

```xsd
<xsd:element name="meanqrsdur" type="TYPEduration"/>
<xsd:element name="meanqtint" type="TYPEduration"/>
<xsd:element name="meanqtc" type="TYPEduration"/>
<xsd:element name="deltawavecount" type="TYPEcount"/>
<xsd:element name="deltawavepercent" type="TYPEpercent"/>
<xsd:element name="bigeminycount" type="TYPEcount"/>
<xsd:element name="bigeminystring" type="TYPEcount"/>
<xsd:element name="trigeminycount" type="TYPEcount"/>
<xsd:element name="trigeminystring" type="TYPEcount"/>
<xsd:element name="wenckcount" type="TYPEcount"/>
<xsd:element name="wenckstring" type="TYPEcount"/>
<xsd:element name="flutterfibcount" type="TYPEcount"/>
<xsd:element name="membercount" type="TYPEcount"/>
<xsd:element name="memberpercent" type="TYPEpercent"/>
<xsd:element name="longestrun" type="TYPEcount"/>
<xsd:element name="ventratestddev" type="TYPErate"/>
<xsd:element name="meanrrint" type="TYPEduration"/>
<xsd:element name="atrialratestddev" type="TYPErate"/>
<xsd:element name="avgpcount" type="TYPEcount"/>
<xsd:element name="notavgpbeats" type="TYPEcount"/>
<xsd:element name="lowprint" type="TYPEduration"/>
<xsd:element name="highprint" type="TYPEduration"/>
<xsd:element name="printstddev" type="TYPEduration"/>
<xsd:element name="meanqtseg" type="TYPEduration"/>
<xsd:element name="comppausecount" type="TYPEcount"/>
<xsd:element name="qrsinitangle" type="TYPEinteger"/>
<xsd:element name="qrsinitmag" type="TYPEinteger"/>
<xsd:element name="qrsmaxangle" type="TYPEinteger"/>
<xsd:element name="qrsmaxmag" type="TYPEinteger"/>
<xsd:element name="qrstermangle" type="TYPEinteger"/>
<xsd:element name="qrstermmag" type="TYPEinteger"/>
<xsd:element name="qrsrotation" type="TYPEinteger"/>
<xsd:element name="globalreserved" type="xsd:string"/>
<xsd:element name="groupreserved" type="xsd:string"/>
<xsd:element name="orderinfo">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="encounterid"/>
                        <xsd:element ref="operatorid"/>
                        <xsd:element ref="ordernumber"/>
                        <xsd:element ref="viperuniqueorderid"/>
```

```
                                <xsd:element ref="orderingclinicianname"/>
                                <xsd:element ref="orderingclinicianUPIN"/>
                                <xsd:element ref="reasonfororder"/>
                                <xsd:element ref="drgcategories"/>
                        </xsd:sequence>
                        <xsd:attribute name="priority" type="xsd:string" use="required"/>
                        <xsd:attribute name="datesubmitted" type="xsd:date" use="optional"/>
                        <xsd:attribute name="timesubmitted" type="xsd:time" use="optional"/>
                        <xsd:attribute name="dateprocessed" type="xsd:date" use="optional"/>
                        <xsd:attribute name="timeprocessed" type="xsd:time" use="optional"/>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="encounterid">
                <xsd:simpleType>
                        <xsd:restriction base="xsd:string">
                                <xsd:maxLength value="40"/>
                        </xsd:restriction>
                </xsd:simpleType>
        </xsd:element>
        <xsd:element name="ordernumber">
                <xsd:simpleType>
                        <xsd:restriction base="xsd:string">
                                <xsd:maxLength value="32"/>
                        </xsd:restriction>
                </xsd:simpleType>
        </xsd:element>
        <xsd:element name="viperuniqueorderid">
                <xsd:simpleType>
                        <xsd:restriction base="xsd:string">
                                <xsd:maxLength value="32"/>
                        </xsd:restriction>
                </xsd:simpleType>
        </xsd:element>
        <xsd:element name="orderingclinicianname">
                <xsd:simpleType>
                        <xsd:restriction base="xsd:string">
                                <xsd:maxLength value="32"/>
                        </xsd:restriction>
                </xsd:simpleType>
        </xsd:element>
```

```xml
<xsd:element name="orderingclinicianUPIN">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="32"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="reviewingclinician">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="32"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="reasonfororder">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="32"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="drgcategories">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="drgcategory" minOccurs="0" maxOccurs="4"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="drgcategory">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                                <xsd:attribute name="id" type="xsd:string" use="required"/>
                                <xsd:attribute name="code" type="xsd:string" use="optional"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="reportinfo">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="reporttype"/>
                        <xsd:element ref="reportdescription"/>
                        <xsd:element ref="reportformat"/>
                        <xsd:element ref="reportgain"/>
                        <xsd:element ref="reportbandwidth"/>
                </xsd:sequence>
                <xsd:attribute name="date" type="xsd:date" use="required"/>
                <xsd:attribute name="time" type="xsd:time" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="reporttype" type="TYPEreporttype"/>
<xsd:element name="reportdescription" type="TYPEreportdescription"/>
        <xsd:element name="reportformat">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="interpretationformat"/>
                        <xsd:element ref="waveformformat"/>
                </xsd:sequence>
                <xsd:attribute name="extendedmeasflag" type="TYPEflag" default="False"/>
                <xsd:attribute name="printtruncationflag" type="TYPEflag" use="optional" default="False"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="interpretationformat" type="TYPEinterpretationformat"/>
<xsd:element name="waveformformat">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="mainwaveformformat"/>
                        <xsd:element ref="rhythmwaveformformat"/>
                </xsd:sequence>
                <xsd:attribute name="leadsequence" type="TYPEleadsequence" use="required"/>
                <xsd:attribute name="timesequence" type="TYPEtimesequence" use="required"/>
        </xsd:complexType>
</xsd:element>
```

```
<xsd:element name="mainwaveformformat">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPElistofleadname">
                                <xsd:attribute name="nrow" use="required">
                                        <xsd:simpleType>
                                                <xsd:restriction base="xsd:positiveInteger">
                                                        <xsd:maxInclusive value="12"/>
                                                        <xsd:minInclusive value="1"/>
                                                </xsd:restriction>
                                        </xsd:simpleType>
                                </xsd:attribute>
                                <xsd:attribute name="ncolumn" use="required">
                                        <xsd:simpleType>
                                                <xsd:restriction base="xsd:positiveInteger">
                                                        <xsd:maxInclusive value="12"/>
                                                        <xsd:minInclusive value="1"/>
                                                </xsd:restriction>
                                        </xsd:simpleType>
                                </xsd:attribute>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="rhythmwaveformformat">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="TYPElistofrhythmlead">
                                <xsd:attribute name="nrhythm" use="required">
                                        <xsd:simpleType>
                                                <xsd:restriction base="xsd:nonNegativeInteger">
                                                        <xsd:maxInclusive value="3"/>
                                                        <xsd:minInclusive value="0"/>
                                                </xsd:restriction>
                                        </xsd:simpleType>
                                </xsd:attribute>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="reportgain">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="amplitudegain"/>
                        <xsd:element ref="timegain"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="amplitudegain">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="overallgain"/>
                        <xsd:element ref="groupgain" minOccurs="0"/>
                        <xsd:element ref="individualleadgain" minOccurs="0"/>
                </xsd:sequence>
                <xsd:attribute name="unit" use="required">
                        <xsd:simpleType>
                                <xsd:restriction base="xsd:string">
                                        <xsd:enumeration value="mm/mv"/>
                                </xsd:restriction>
                        </xsd:simpleType>
                </xsd:attribute>
        </xsd:complexType>
</xsd:element>
<xsd:element name="overallgain" type="xsd:float"/>
<xsd:element name="groupgain">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:float">
                                <xsd:attribute name="leadgroupname" use="required">
                                        <xsd:simpleType>
                                                <xsd:list itemType="TYPEleadname"/>
                                        </xsd:simpleType>
                                </xsd:attribute>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="individualleadgain">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:float">
                                <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="timegain">
        <xsd:complexType>
                <xsd:simpleContent>
                        <xsd:extension base="xsd:float">
                                <xsd:attribute name="unit" use="required">
                                        <xsd:simpleType>
                                                <xsd:restriction base="xsd:string">
                                                        <xsd:enumeration value="mm/s"/>
                                                </xsd:restriction>
                                        </xsd:simpleType>
                                </xsd:attribute>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="reportbandwidth">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="highpassfiltersetting"/>
                        <xsd:element ref="lowpassfiltersetting"/>
                        <xsd:element ref="notchfiltersetting"/>
                        <xsd:element ref="notchharmonicssetting" minOccurs="0"/>
                        <xsd:element ref="artifactfilterflag" minOccurs="0"/>
                        <xsd:element ref="hysterisisfiltersflag" minOccurs="0"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="highpassfiltersetting" type="TYPEhighpassfiltersetting"/>
<xsd:element name="lowpassfiltersetting" type="TYPElowpassfiltersetting"/>
<xsd:element name="notchfiltersetting" type="TYPEacfiltersetting"/>
<xsd:element name="notchharmonicssetting" type="TYPEacharmonicssetting"/>
```

```xml
<xsd:element name="artifactfilterflag" type="TYPEflag"/>
<xsd:element name="hysterisisfiltersflag" type="TYPEflag"/>
<xsd:simpleType name="TYPEnull">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value=""/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPErestingecgstatus">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Not yet determined"/>
                <xsd:enumeration value="New"/>
                <xsd:enumeration value="Await review"/>
                <xsd:enumeration value="Await confirm"/>
                <xsd:enumeration value="Confirmed"/>
                <xsd:enumeration value="Unconfirmed"/>
                <xsd:enumeration value="Archived"/>
                <xsd:enumeration value="Deleted"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEdate">
        <xsd:union memberTypes="TYPEnull xsd:date"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEinvalid">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value=""/>
                <xsd:enumeration value="Indeterminate"/>
                <xsd:enumeration value="Invalid"/>
                <xsd:enumeration value="Failed"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEinvalid2">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Invalid"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEschemaname">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="SierraECG"/>
        </xsd:restriction>
</xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEschemaversion">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="1.03"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEflag">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="True"/>
                <xsd:enumeration value="False"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEflag2">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="Positive"/>
                <xsd:enumeration value="Negative"/>
                <xsd:enumeration value="Both positive and negative"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEflag3">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Unknown"/>
                <xsd:enumeration value="True"/>
                <xsd:enumeration value="False"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEpacestatus">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Paced"/>
                <xsd:enumeration value="Non paced"/>
                <xsd:enumeration value="Paced with magnet"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEinteger">
        <xsd:union memberTypes="xsd:integer TYPEinvalid"/>
</xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEamplitude2">
        <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="10000"/>
                <xsd:minInclusive value="-10000"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEamplitude">
        <xsd:union memberTypes="TYPEamplitude2 TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEpeaktopeak2">
        <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="20000"/>
                <xsd:minInclusive value="0"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEpeaktopeak">
        <xsd:union memberTypes="TYPEpeaktopeak2 TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEstarttime2">
        <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="11000"/>
                <xsd:minInclusive value="0"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEstarttime">
        <xsd:union memberTypes="TYPEstarttime2 TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEduration2">
        <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="11000"/>
                <xsd:minInclusive value="0"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEduration">
        <xsd:union memberTypes="TYPEduration2 TYPEinvalid"/>
</xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEfiducial2">
        <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="11000"/>
                <xsd:minInclusive value="0"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEfiducial">
        <xsd:union memberTypes="TYPEfiducial2 TYPEinvalid2"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEarea2">
        <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="20000"/>
                <xsd:minInclusive value="-20000"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEarea">
        <xsd:union memberTypes="TYPEarea2 TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEindex2">
        <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="100"/>
                <xsd:minInclusive value="0"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEindex">
        <xsd:union memberTypes="TYPEindex2 TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEcount2">
        <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="500"/>
                <xsd:minInclusive value="0"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEcount">
        <xsd:union memberTypes="TYPEcount2 TYPEinvalid"/>
</xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEpercent2">
        <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="100"/>
                <xsd:minInclusive value="0"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEpercent">
        <xsd:union memberTypes="TYPEpercent2 TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPErate2">
        <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="1200"/>
                <xsd:minInclusive value="0"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPErate">
        <xsd:union memberTypes="TYPErate2 TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEaxis2">
        <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="360"/>
                <xsd:minInclusive value="-360"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEaxis">
        <xsd:union memberTypes="TYPEaxis2 TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEstslope2">
        <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="90"/>
                <xsd:minInclusive value="-90"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEstslope">
        <xsd:union memberTypes="TYPEstslope2 TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEbp">
        <xsd:union memberTypes="xsd:float TYPEinvalid"/>
</xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEheight">
        <xsd:union memberTypes="xsd:float TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEweight">
        <xsd:union memberTypes="xsd:float TYPEinvalid"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEstshape">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Straight"/>
                <xsd:enumeration value="Convex"/>
                <xsd:enumeration value="Concave"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEnoiselevel">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="Light"/>
                <xsd:enumeration value="Marked"/>
                <xsd:enumeration value="Severe"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEnoise">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Baseline artifacts"/>
                <xsd:enumeration value="AC artifacts"/>
                <xsd:enumeration value="Muscle artifacts"/>
        </xsd:restriction>
</xsd:simpleType>

<xsd:simpleType name="TYPEageyears">
        <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="199"/>
                <xsd:minInclusive value="1"/>
        </xsd:restriction>
</xsd:simpleType>
```

```
<xsd:simpleType name="TYPEsex">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Unknown"/>
                <xsd:enumeration value="Male"/>
                <xsd:enumeration value="Female"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEgroupnumber">
        <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="50"/>
                <xsd:minInclusive value="0"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPElistofgroupnumber">
        <xsd:list itemType="TYPEgroupnumber"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEcriteriaversion">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="01"/>
                <xsd:enumeration value="02"/>
                <xsd:enumeration value="03"/>
                <xsd:enumeration value="04"/>
                <xsd:enumeration value="05"/>
                <xsd:enumeration value="06"/>
                <xsd:enumeration value="07"/>
                <xsd:enumeration value="08"/>
                <xsd:enumeration value="09"/>
                <xsd:enumeration value="0A"/>
                <xsd:enumeration value="P2"/>
                <xsd:enumeration value="P3"/>
                <xsd:enumeration value="P4"/>
                <xsd:enumeration value="H0"/>
                <xsd:enumeration value="H8"/>
                <xsd:enumeration value="T0"/>
                <xsd:enumeration value="T8"/>
                <xsd:enumeration value="V8"/>
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="Unknown"/>
                <xsd:enumeration value="Custom"/>
        </xsd:restriction>
```

```
        </xsd:simpleType>

<xsd:simpleType name="TYPEmeasurementversion">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="7"/>
                <xsd:enumeration value="8"/>
                <xsd:enumeration value="9"/>
                <xsd:enumeration value="Custom"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEinterpretationformat">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="Severity only"/>
                <xsd:enumeration value="Short measurements"/>
                <xsd:enumeration value="Extended measurements"/>
                <xsd:enumeration value="Interpretations"/>
                <xsd:enumeration value="Interpretations and reasons"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEleadname">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="I"/>
                <xsd:enumeration value="II"/>
                <xsd:enumeration value="III"/>
                <xsd:enumeration value="aVR"/>
                <xsd:enumeration value="-aVR"/>
                <xsd:enumeration value="aVL"/>
                <xsd:enumeration value="aVF"/>
                <xsd:enumeration value="V1"/>
                <xsd:enumeration value="V2"/>
                <xsd:enumeration value="V3"/>
                <xsd:enumeration value="V4"/>
                <xsd:enumeration value="V5"/>
                <xsd:enumeration value="V6"/>
                <xsd:enumeration value="C1"/>
                <xsd:enumeration value="C2"/>
                <xsd:enumeration value="C3"/>
                <xsd:enumeration value="C4"/>
                <xsd:enumeration value="C5"/>
                <xsd:enumeration value="C6"/>
```

```xml
                        <xsd:enumeration value="V3R"/>
                        <xsd:enumeration value="V4R"/>
                        <xsd:enumeration value="V7"/>
                        <xsd:enumeration value="V8"/>
                        <xsd:enumeration value="C3R"/>
                        <xsd:enumeration value="C4R"/>
                        <xsd:enumeration value="C7"/>
                        <xsd:enumeration value="C8"/>
                        <xsd:enumeration value="VX1"/>
                        <xsd:enumeration value="VX2"/>
                        <xsd:enumeration value="VX3"/>
                        <xsd:enumeration value="VX4"/>
                        <xsd:enumeration value="CX1"/>
                        <xsd:enumeration value="CX2"/>
                        <xsd:enumeration value="CX3"/>
                        <xsd:enumeration value="CX4"/>
                        <xsd:enumeration value="X"/>
                        <xsd:enumeration value="Y"/>
                        <xsd:enumeration value="Z"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEvcgname">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="X"/>
                        <xsd:enumeration value="Y"/>
                        <xsd:enumeration value="Z"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPElistofleadname">
                <xsd:list itemType="TYPEleadname"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPElistofvcgname">
                <xsd:list itemType="TYPEvcgname"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPElistofrhythmlead">
                <xsd:union memberTypes="TYPElistofleadname TYPElistofvcgname"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEcompress">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="XLI"/>
                </xsd:restriction>
```

```
            </xsd:simpleType>
            <xsd:simpleType name="TYPEnbitspersample">
                        <xsd:restriction base="xsd:positiveInteger">
                                    <xsd:maxInclusive value="24"/>
                                    <xsd:minInclusive value="8"/>
                        </xsd:restriction>
            </xsd:simpleType>
            <xsd:simpleType name="TYPEdataencoding">
                        <xsd:restriction base="xsd:string">
                                    <xsd:enumeration value="Plain"/>
                                    <xsd:enumeration value="Base64"/>
                                    <xsd:enumeration value="Hex"/>
                        </xsd:restriction>
            </xsd:simpleType>

            <xsd:simpleType name="TYPEmachine">
                        <xsd:restriction base="xsd:string">
                                    <xsd:enumeration value="Unknown"/>
                                    <xsd:enumeration value="HeartstartMRx"/>
                                    <xsd:enumeration value="IntelliVue"/>
                                    <xsd:enumeration value="CMS"/>
                                    <xsd:enumeration value="PageWriter"/>
                                    <xsd:enumeration value="PageWriter XL"/>
                                    <xsd:enumeration value="PageWriter Touch"/>
                                    <xsd:enumeration value="PageWriter Trim"/>
                                    <xsd:enumeration value="5600C System"/>
                                    <xsd:enumeration value="M1730 System"/>
                                    <xsd:enumeration value="M1729 System"/>
                                    <xsd:enumeration value="M3700 System"/>
                                    <xsd:enumeration value="Holter"/>
                                    <xsd:enumeration value="Telemetry"/>
                                    <xsd:enumeration value="Stress"/>
                                    <xsd:enumeration value="Migrated from 5600C System"/>
                                    <xsd:enumeration value="Other Manufacturer System"/>
                                    <xsd:enumeration value="Other Manufacturer Systems"/>
                                    <xsd:enumeration value="Other Manufacturer Device"/>
                                    <xsd:enumeration value="Other Philips Cardiograph"/>
                                    <xsd:enumeration value="Other Philips Defibrillator"/>
                                    <xsd:enumeration value="Other Philips Monitor"/>
                                    <xsd:enumeration value="Other"/>
                        </xsd:restriction>
```

```
</xsd:simpleType>
<xsd:simpleType name="TYPEacquisitiontype">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="MIDA"/>
                <xsd:enumeration value="EASI"/>
                <xsd:enumeration value="STD-12"/>
                <xsd:enumeration value="STD-15"/>
                <xsd:enumeration value="STD-16"/>
                <xsd:enumeration value="STD-18"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEleadset">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Unknown"/>
                <xsd:enumeration value="STD-3"/>
                <xsd:enumeration value="STD-4"/>
                <xsd:enumeration value="STD-5"/>
                <xsd:enumeration value="MCL-5"/>
                <xsd:enumeration value="STD-12"/>
                <xsd:enumeration value="STD-12 MASON-LIKAR"/>
                <xsd:enumeration value="MIDA"/>
                <xsd:enumeration value="EASI"/>
                <xsd:enumeration value="EASI ON STERNUM STANDARD"/>
                <xsd:enumeration value="EASI ON STERNUM MASON-LIKAR"/>
                <xsd:enumeration value="EASI OFF STERNUM STANDARD"/>
                <xsd:enumeration value="EASI OFF STERNUM MASON-LIKAR"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEreporttype">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="MIDA"/>
                <xsd:enumeration value="EASI"/>
                <xsd:enumeration value="STD-12"/>
                <xsd:enumeration value="STD-12 MASON-LIKAR"/>
        </xsd:restriction>
</xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEleadsequence">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Standard"/>
                <xsd:enumeration value="Cabrera"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEtimesequence">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Continuous"/>
                <xsd:enumeration value="Simultaneous"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEreportdescription">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Standard 12 Lead Report"/>
                <xsd:enumeration value="Standard 12 Lead Report with Mason Likar lead set"/>
                <xsd:enumeration value="MIDA derived 12 Lead Report"/>
                <xsd:enumeration value="EASI derived 12 Lead Report"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEsamplingrate">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="125"/>
                <xsd:enumeration value="250"/>
                <xsd:enumeration value="500"/>
                <xsd:enumeration value="1000"/>
                <xsd:enumeration value="2000"/>
                <xsd:enumeration value="4000"/>
                <xsd:enumeration value="8000"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEsignalresolution">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="1.25"/>
                <xsd:enumeration value="2.5"/>
                <xsd:enumeration value="5"/>
                <xsd:enumeration value="10"/>
                <xsd:enumeration value="20"/>
        </xsd:restriction>
</xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEsignalbandwidth">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="0.05-40"/>
                <xsd:enumeration value="0.05-100"/>
                <xsd:enumeration value="0.05-150"/>
                <xsd:enumeration value="0.05-300"/>
                <xsd:enumeration value="0.05-500"/>
                <xsd:enumeration value="0.15-40"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPElowpassfiltersetting">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="40"/>
                <xsd:enumeration value="100"/>
                <xsd:enumeration value="150"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEhighpassfiltersetting">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="0.05"/>
                <xsd:enumeration value="0.15"/>
                <xsd:enumeration value="0.5"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEacsetting">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="50"/>
                <xsd:enumeration value="60"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEacfiltersetting">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="50"/>
                <xsd:enumeration value="60"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEacharmonicssetting">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="100"/>
                <xsd:enumeration value="150"/>
                <xsd:enumeration value="100,150"/>
                <xsd:enumeration value="120"/>
                <xsd:enumeration value="180"/>
                <xsd:enumeration value="120,180"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEactioncode">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="ECG OK"/>
                <xsd:enumeration value="Poor ECG, retry if possible"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEmessagecode">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="Acceptable trace"/>
                <xsd:enumeration value="Check QA message history"/>
                <xsd:enumeration value="Overrange"/>
                <xsd:enumeration value="Artifact"/>
                <xsd:enumeration value="Baseline wander"/>
                <xsd:enumeration value="Missing lead(s)"/>
                <xsd:enumeration value="Phone noise"/>
                <xsd:enumeration value="AC interference"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEpaceamptype">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Up swing first"/>
                <xsd:enumeration value="Down swing first"/>
                <xsd:enumeration value="Positive"/>
                <xsd:enumeration value="Negative"/>
                <xsd:enumeration value="Biphasic"/>
        </xsd:restriction>
</xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEpacemode">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value=""/>
                <xsd:enumeration value="Atrial pace"/>
                <xsd:enumeration value="Ventricular pace"/>
                <xsd:enumeration value="Atrial sense ventricular pace"/>
                <xsd:enumeration value="AV dual pace"/>
                <xsd:enumeration value="Mixed pace"/>
                <xsd:enumeration value="Intermittent pace"/>
                <xsd:enumeration value="Demand pace"/>
                <xsd:enumeration value="Unknown pace"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEpacemalf">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value=""/>
                <xsd:enumeration value="Non capture"/>
                <xsd:enumeration value="Non sense"/>
                <xsd:enumeration value="Non capture and non sense"/>
                <xsd:enumeration value="Free run"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEpacemisc">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value=""/>
                <xsd:enumeration value="Pace like artifacts"/>
                <xsd:enumeration value="ECG acquired with magnet in place"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEectopicrhythm">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value=""/>
                <xsd:enumeration value="APC Atrial Premature Complex"/>
                <xsd:enumeration value="JPC Junctional Premature Complex"/>
                <xsd:enumeration value="APCS Atrial Premature Complexes"/>
                <xsd:enumeration value="JPCS Junctional Premature Complexes"/>
                <xsd:enumeration value="ABIG Supra-ventricular Bigeminy"/>
                <xsd:enumeration value="VPC Ventricular Premature Complex"/>
                <xsd:enumeration value="VPCS Ventricular Premature Complexes"/>
                <xsd:enumeration value="APC(S) and PVC(S) Ectopics, both Supravent and Vent in origin"/>
                <xsd:enumeration value="VTRIG Ventricular Trigeminy"/>
```

```xml
                        <xsd:enumeration value="VBIG Ventricular Bigeminy"/>
                        <xsd:enumeration value="MFPVCS Multiform VPCs"/>
                        <xsd:enumeration value="PAIR Pair(s) of Ventricular Complexes"/>
                        <xsd:enumeration value="MFPAIR Pair(s) with Multiform V complexes(not necessarily in the pair)"/>
                        <xsd:enumeration value="RUN Run(s) (>=3) of Ventricular Complexes"/>
                        <xsd:enumeration value="MFRUN Run(s) with Multiform V complexes(not necessarily in the run)"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEstatementsource">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value=""/>
                        <xsd:enumeration value="Analysis program"/>
                        <xsd:enumeration value="Quality monitor"/>
                        <xsd:enumeration value="Serial comparison"/>
                        <xsd:enumeration value="Editor"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEstatementsubtype">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="Analysis"/>
                        <xsd:enumeration value="Serial comparison"/>
                        <xsd:enumeration value="Other"/>
                        <xsd:enumeration value="Unknown"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEunparsedstatementsource">
                <xsd:restriction base="TYPEstatementsource"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEcodedstatementsource">
                <xsd:restriction base="TYPEstatementsource"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEuncodedstatementsource">
                <xsd:restriction base="TYPEstatementsource"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEqualitystatementsource">
                <xsd:restriction base="TYPEstatementsource"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEremarkstatementsource">
                <xsd:restriction base="TYPEstatementsource"/>
        </xsd:simpleType>
```

```xml
<xsd:simpleType name="TYPEformat">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Narrow"/>
                <xsd:enumeration value="Wide"/>
        </xsd:restriction>
</xsd:simpleType>
</xsd:schema>
```

XML Schema 1.04

<?xml version="1.0" encoding="UTF-8"?>

<!--Conforms to w3c http://www.w3.org/2001/XMLSchema-->

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www3.medical.philips.com" targetNamespace="http://www3.medical.philips.com" elementFormDefault="qualified">

    <xsd:annotation>

        <xsd:documentation xml:lang="en">

           Note: all amplitudes are in microvolts (uV);

                    all intervals, durations, and fiducial times are in milliseconds;

                    filter frequency cutoff values are in Hertz (Hz).

Revision history:

    - all rev 1.04 modifications described in "Philips_ECG_ Schema_1.04_Changes_June_27_2005.xls"

rev. 1.04   Sept. 6, 2005

    - made pacepulse element "TYPEnull" so that whitespace in the pacepulse element will not prevent schema validation. (TMVue exports whitespace in this element).

rev. 1.04   June 27, 2005

    - deleted TYPEInvalid and changed TYPEfiducial to TYPEInvalidPlus

rev. 1.04   June 10, 2005

    - re-inserted all Cx labels for backwards compatibility

rev. 1.04   June 9, 2005

    - added patient@customcriteriaversion and patient@othercriteriaversion

    - added additional lead labels and deleted all Cx labels

    - made a few more elements optional

    - added dataacquisition/modality

    - added generalpatientdata/secondaryid

    - added "Migration" to statementsource

    - added optional globalmeasurements/atrialrate

rev. 1.04   April 27, 2005

    - comments updated

rev. 1.04   March 28, 2005 (d)

    - all "people" (except patient) are now one element holding their "name"; with a 64 char max @id attribute

- added editor (to documentinfo) with @id @date @time;

- added confirmingclinician (to interpretation) with @id @date @time;

- added internalmeasurements/configsettings

- simplified "namedmeasurement"

- added union with null to pacemode, pacemisc, pacemalf, ectopicrhythm

- added   xsd:whiteSpace value="collapse"   to elements which allow "" (null) values.

- this allows: both <pacemode/> and

                <pacemode>

                </pacemode> (which includes a CR/LF/Tab) to pass schema validation

rev. 1.04   March 11, 2005

- in parsedwaveforms, unparsedwaveforms, and leadwaveforms:

    a) renamed "hipassbandwidth" to "hipass" to be consistent with dataacquisition

    b) renamed "lowpassbandwidth" to "lowpass" to be consistent with dataacquisition

        Note: "hipass" and "lowpass" were specified in:

            "Philips_ECG_ Schema_1.04_Changes_March_4_2005.xls"

    c) added signaloffset (integer) and signalsigned (flag) since these could also

        be modified by a system after signal acquisition

    d) made resolution, hipass, lowpass, notchfiltered and signalsigned "required" attributes

    e) renamed "nbitspersample" to "bitspersample" to be consistent with dataacquisition

    f) made samplespersecond type "float" to match dataacquisition

    g) re-ordered sequence of attributes to be more logical

- changed "signaloffset" in dataacquisition from type "string" to "integer"

- repbeat@samplespersecond has also been changed to type "float".

rev. 1.04   March 4, 2005

- renamed ../userdefine@number to ../userdefine/@index.

- deleted legacy crossleadmeasurements/pon qrson qrsoff ton toff; rep beat measurements should be used.

- deleted "default=0" for pacemode, pacemalf,pacemisc,ectopicrhythm

- deleted all "default=False" for flag attributes, and explicitly made those attributes optional: if not present, assume "False"

rev. 1.04   March 3, 2005

- added optional "filename" element to documentinfo section

rev. 1.04   March 2, 2005

- TYPEacquisitiontype: "STD-12" changed to "10-WIRE" for consistency

- patient @criteriaversionforpatientdata attribute added back in

rev. 1.04   March 1, 2005

- major modifications; described in "Philips_ECG_ Schema_1.04_Changes_March_1_2005.xls"

---

rev. 1.03

Sep. 22nd. 2003
- add tag compareinfostatement under
    /restingecgdata/interpretations/interpretation/serialcomparison/previousecg/

July 29th. 2003
- allow float values for amplitude gain and time gain
    for example, allow 2.5mm/mv setting for amplitude gain

July 21st. 2003
- add valid lead names: X, Y, and Z
- allow no groupmeasurement(usually when Renaissance given defective data)
- add new type TYPEinteger to allow vector meas. to have invalid values(blank, Failed, and so on...)
    this is the case if Philips 12-Lead algorithm encounters bad data
- add optional reviewingclinician element under acquirer
- add optional @printtruncationflag in reportformat to indicate
    printing of truncated fields is requested
- change the ncolumn max from 5 to 12 to accomodate 1x12(PAN12) report
- add optional @machineid to the machine element(=Sierra/Viper deviceid)
- make @crc optional; if not there, don't enforce crc checking
- add drgcategory the same level as symptom, history etc...
- add optional global meas. qrs transversed vector
- add optional defaultage attribute to the age element
- add optional acsetting element under signalcharacteristics
- change STATflag attribute in orderinfo to priority
- correct an error in the userdefine minimum req.(from 1 to 0)
- add drgcategories element as parent of drgcategory element
- add code attribute to the drgcategory element
- make the id attribute of race, symptom, history, medication and diagnosis
    required
- make the code attribute of race, symptom, history, medication and diagnosis
    optional
- add attribute timesequence to waveformformat element
    the possible value for timesequence is Continous or Simultaneous
- make previousecg element optional
- add date and time attribute to the previousecg element
- add crc attribute to root element restingecgdata
    will compute crc from documentinfo to the end of the file
- add new values to TYPEstatementsource
- change previousecgs to previousecg
- add status attribute to previousecg element

- add element severity to previousecg element
- add subtype attribute to codedstatement
- add subtype attribute to qualitystatement
- add new type TYPEstatementsubtype
- rename compareinfostatement to mdsignatureline
- delete elements under interpretationdatastructure except statementcomponents
- add/modify machine element possible values
- add attribute detaildescription for machine element; will be used to store
    machine information such as software rev. etc...
    the current convention is :
        MFG:MODEL:SW_REV(: separated values)

rev. 1.02   Nov. 25th. 2002
- add Unknown value to gender element
- allow multiple words for race element
- add pacestatus element to indicate the patient pace state
- modify serial comparison tags per recommendation from Leigh Wells
- for age only allows 1 type of entry: dob or years or months or weeks etc...
- add fiducial attributes for the rep beat waveforms
- add more possible values to the pace status, pace misc. and pace modes
- add optional extended measurement flag in the report info
- add optional unique database id for Viper database
- add optional filterflag to the parsedwaveform
- add optional lead names with active pace detections
- add optional pace amplitude value attributes

rev. 1.01   June 10th. 2002
- add new element compareinfostatement
- add new attrib criteriaversionforpatientdata
- patientid element cannot be null; has to contain between 1 and 40 chars inclusive
- add optional id attrib to race, severity, ecg_severity, symptom, history,
    diagnosis and medication
- simplify the elements in interpretationdatastructure; also add code and id attrib
    to the elements
- add new enum values to TYPEcriteriaversion: V8, None and Unknown
- remove 1 enum value from TYPEcriteriaversion: P1

rev. 1.00   May 23rd. 2002
- Draft to Release status

```
            </xsd:documentation>
        </xsd:annotation>
        <!-- -->
        <!--Conforms to w3c http://www.w3.org/2001/XMLSchema-->
        <!-- -->
        <!-- include the extended type file for custom types -->
        <xsd:include schemaLocation="PhilipsECGExtendedType.xsd"/>
        <!-- -->
        <!-- ======================================================================= -->
        <!--   This is the highest level document description: -->
        <xsd:element name="restingecgdata">
            <xsd:complexType>
                <xsd:sequence>
                    <!-- document/file information: -->
                    <xsd:element ref="documentinfo"/>
                    <!-- these are user-configurable fields from the cardiograph: -->
                    <xsd:element ref="userdefines" minOccurs="0"/>
                    <!-- ECG "order" information: -->
                    <xsd:element ref="orderinfo" minOccurs="0"/>
                    <!-- this section contains links to previous and/or subsequent ECGs: -->
                    <xsd:element ref="otherECGs" minOccurs="0"/>
                    <!-- description of the report format used to display the visual ECG report: -->
                    <xsd:element ref="reportinfo"/>
                    <!-- description of the data acquisition settings, as well as the acquirer, for example, hospital, location, physician, etc.: -->
                    <xsd:element ref="dataacquisition"/>
                    <!-- patient information: -->
                    <xsd:element ref="patient"/>
                    <!-- these "internal" measurements are measurements and variables generated by the automated
                          diagnostic algorithm; global meaurements in the "interpretation" section supercede these values:  -->
                    <xsd:element ref="internalmeasurements" minOccurs="0"/>
                    <!-- this section contains diagnostic interpretations made by the diagnostic algorithm and/or
            interpretations added or editted by a reviewing cardiologist;  in addition, this section contains
            the final "global" measurements, which also may have been manually editted; these measurements
            will always take precedence over those in the "internalmeasurements" section: -->
                    <xsd:element ref="interpretations" minOccurs="0"/>
                    <!-- ECG waveform sample values;  the settings in the "dataacquisition" section describe the waveform
             data, unless the data has subsequently been modified (for example, filtered, resampled) by a subsequent device,
             in which case a flag is set, and the settings in this section will then describe the waveform data: -->
                    <xsd:element ref="waveforms" minOccurs="0"/>
                </xsd:sequence>
```

```xml
                    <xsd:attribute name="crc" type="xsd:string" use="optional"/>
                    <xsd:attribute name="status" type="TYPErestingecgstatus" use="required"/>
                    <xsd:attribute name="lang" type="xsd:language" use="required"/>
                    <xsd:attribute name="locale" type="xsd:language" use="optional"/>
                    <!-- @crc: the cyclic-redundancy-check value, if available. -->
            </xsd:complexType>
    </xsd:element>
    <!-- ============================================================================ -->
    <xsd:element name="documentinfo">
            <xsd:complexType>
                <xsd:sequence>
                    <!-- this is usually the name of the file, that is not a requirement; this field should always be a
            36 character GUID (globally unique identifier), followed by ".xml": -->
                        <xsd:element ref="documentname"/>
                        <!-- optional filename (if different from the documentname; no length restrictions): -->
                        <xsd:element name="filename" type="xsd:string" minOccurs="0"/>
                        <!-- name of the schema: -->
                        <xsd:element ref="documenttype"/>
                        <!-- schema version: -->
                        <xsd:element ref="documentversion"/>
                        <!-- name with @id of the most recent ECG editor (with @date and @time of last edit) -->
                        <xsd:element name="editor" type="TYPEpersonwithdatetime" minOccurs="0"/>
                        <!-- optional comments added to describe the ECG -->
                        <xsd:element name="comments" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
            </xsd:complexType>
    </xsd:element>
    <!-- should be "GUID.xml" with a 36 character GUID -->
    <xsd:element name="documentname">
            <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:length value="40"/>
                </xsd:restriction>
            </xsd:simpleType>
    </xsd:element>
    <xsd:element name="documenttype">
            <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="PhilipsECG"/>
                </xsd:restriction>
            </xsd:simpleType>
```

```
</xsd:element>
<xsd:element name="documentversion">
    <xsd:simpleType>
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="1.04"/>
        </xsd:restriction>
    </xsd:simpleType>
</xsd:element>
<!-- ========================================================================= -->
<!-- user defined fields: -->
<xsd:element name="userdefines">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="userdefine" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="userdefine">
    <xsd:complexType>
        <xsd:sequence>
            <!-- user configured label: -->
            <xsd:element ref="label"/>
            <!-- the user entered value of the field: -->
            <xsd:element ref="value"/>
        </xsd:sequence>
        <xsd:attribute name="index" type="xsd:positiveInteger" use="required"/>
        <!-- @number: the ID of the userdefine, i.e., 1,2,3, ...,:  -->
    </xsd:complexType>
</xsd:element>
<xsd:element name="label">
    <xsd:simpleType>
        <xsd:restriction base="xsd:string">
            <xsd:maxLength value="32"/>
        </xsd:restriction>
    </xsd:simpleType>
</xsd:element>
<xsd:element name="value">
    <xsd:simpleType>
        <xsd:restriction base="xsd:string">
            <xsd:maxLength value="32"/>
        </xsd:restriction>
```

```xml
        </xsd:simpleType>
    </xsd:element>
    <!-- ======================================================================= -->
    <xsd:element name="orderinfo">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="ordernumber"/>
                <xsd:element ref="uniqueorderid"/>
                <xsd:element name="orderbillingcode" type="xsd:string" minOccurs="0"/>
                <xsd:element name="orderremarks" type="xsd:string" minOccurs="0"/>
                <xsd:element ref="reasonfororder" minOccurs="0"/>
                <xsd:element ref="drgcategories" minOccurs="0"/>
                <xsd:element ref="orderstatus" minOccurs="0"/>
                <!-- this is the logical dept association: -->
                <xsd:element ref="inbox" minOccurs="0"/>
                <!-- optional elements for future use: -->
                <xsd:element name="other" minOccurs="0" maxOccurs="unbounded">
                    <xsd:complexType>
                        <xsd:simpleContent>
                            <xsd:extension base="xsd:string">
                                <xsd:attribute name="label" type="xsd:string" use="required"/>
                            </xsd:extension>
                        </xsd:simpleContent>
                    </xsd:complexType>
                </xsd:element>
            </xsd:sequence>
            <xsd:attribute name="priority" type="xsd:string" use="required"/>
            <xsd:attribute name="orderrequestdate" type="xsd:date" use="optional"/>
            <xsd:attribute name="orderrequesttime" type="xsd:time" use="optional"/>
            <xsd:attribute name="dateprocessed" type="xsd:date" use="optional"/>
            <xsd:attribute name="timeprocessed" type="xsd:time" use="optional"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="ordernumber">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="uniqueorderid">
```

```
            <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                    <xsd:maxLength value="32"/>
                </xsd:restriction>
            </xsd:simpleType>
    </xsd:element>
    <xsd:element name="reasonfororder">
            <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                    <xsd:maxLength value="32"/>
                </xsd:restriction>
            </xsd:simpleType>
    </xsd:element>
    <xsd:element name="drgcategories">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element ref="drgcategory" minOccurs="0" maxOccurs="4"/>
                </xsd:sequence>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="drgcategory">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="xsd:string">
                        <xsd:attribute name="id" type="xsd:string" use="required"/>
                        <xsd:attribute name="code" type="xsd:string" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="orderstatus">
            <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                    <xsd:maxLength value="32"/>
                </xsd:restriction>
            </xsd:simpleType>
    </xsd:element>
    <xsd:element name="inbox">
            <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                    <xsd:maxLength value="32"/>
```

```xml
                </xsd:restriction>
            </xsd:simpleType>
        </xsd:element>
        <!-- ========================================================================= -->
        <!-- links to previous or subsequent ECGs: -->
        <xsd:element name="otherECGs">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element name="otherECG" minOccurs="0" maxOccurs="unbounded">
                        <xsd:complexType>
                            <xsd:sequence>
                                <!-- type is either "previous" or "subsequent" -->
                                <xsd:element name="type" type="TYPEotherECGtype"/>
                                <xsd:element name="documentname" type="xsd:string"/>
                                <xsd:element ref="severity" minOccurs="0"/>
                                <xsd:element name="mdsignatureline" type="xsd:string" minOccurs="0"/>
                                <!-- optional other information (future use): -->
                                <!-- other info has both a "label" (attribute) and a "value" (node): -->
                                <xsd:element name="other" minOccurs="0" maxOccurs="unbounded">
                                    <xsd:complexType>
                                        <xsd:simpleContent>
                                            <xsd:extension base="xsd:string">
                                                <xsd:attribute name="label" type="xsd:string" use="required"/>
                                            </xsd:extension>
                                        </xsd:simpleContent>
                                    </xsd:complexType>
                                </xsd:element>
                            </xsd:sequence>
                            <xsd:attribute name="date" type="xsd:date" use="required"/>
                            <xsd:attribute name="time" type="xsd:time" use="required"/>
                            <xsd:attribute name="status" type="TYPErestingecgstatus" use="optional"/>
                        </xsd:complexType>
                    </xsd:element>
                </xsd:sequence>
            </xsd:complexType>
        </xsd:element>
        <xsd:simpleType name="TYPEotherECGtype">
            <xsd:restriction base="xsd:string">
                <xsd:enumeration value="previous"/>
                <xsd:enumeration value="subsequent"/>
            </xsd:restriction>
```

```xml
        </xsd:simpleType>
<!-- ======================================================================= -->
<xsd:element name="reportinfo">
        <xsd:complexType>
                <xsd:sequence>
                        <!-- reportlabel provides important information to the reviewing clinician, and should be printed on the report;
                                        (or at least if it is not a standard 12 lead.....)
                                        it combines electrode placement information with report format information: -->
                        <xsd:element ref="reportlabel"/>
                        <!-- a more detailed description of the report:
                 (if "reportlabel" is "Other", then this description should be used): -->
                        <xsd:element ref="reportdescription"/>
                        <!-- format characteristics: -->
                        <xsd:element ref="reportformat"/>
                        <!-- waveform gain settings to be used for the report: -->
                        <xsd:element ref="reportgain"/>
                        <!-- bandwidth settings to be used for the report: -->
                        <xsd:element ref="reportbandwidth"/>
                        <!-- this is a complete copy of all the settings for a report;
                 to be used to save either the original report settings if they are subsequently modified,
                 or modified report settings, or report settings for an individual user -->
                        <xsd:element ref="savedreportinfo" minOccurs="0" maxOccurs="unbounded"/>
                 </xsd:sequence>
                 <xsd:attribute name="date" type="xsd:date" use="required"/>
                 <xsd:attribute name="time" type="xsd:time" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="reportlabel" type="TYPEreportlabel"/>
<!-- Use "STD 12 LEAD" for most reports;
  Use "STD 12 LEAD; REP BEAT" for PAN-12 report -->
<xsd:simpleType name="TYPEreportlabel">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="STD 12 LEAD"/>
                <xsd:enumeration value="STD 12+ LEAD"/>
                <xsd:enumeration value="MASON-LIKAR 12 LEAD"/>
                <xsd:enumeration value="MASON-LIKAR 12+ LEAD"/>
                <xsd:enumeration value="MOD LEAD PLACEMENT"/>
                <xsd:enumeration value="STD PLACEMENT; SOME LEADS DERIVED"/>
                <xsd:enumeration value="MASON-LIKAR; SOME LEADS DERIVED"/>
                <xsd:enumeration value="MOD LEAD PLACEMENT; SOME LEADS DERIVED"/>
                <xsd:enumeration value="EASI DERIVED LEADS"/>
```

```
        <xsd:enumeration value="EASI (OFF STERNUM) DERIVED LEADS"/>
        <xsd:enumeration value="STD 12 LEAD; REP BEAT"/>
        <xsd:enumeration value="STD 12+ LEAD; REP BEAT"/>
        <xsd:enumeration value="MASON-LIKAR 12 LEAD; REP BEAT"/>
        <xsd:enumeration value="MASON-LIKAR 12+ LEAD; REP BEAT"/>
        <xsd:enumeration value="MOD LEAD PLACEMENT; REP BEAT"/>
        <xsd:enumeration value="EASI DERIVED LEADS; REP BEAT"/>
        <xsd:enumeration value="EASI (OFF STERNUM) DERIVED LEADS; REP BEAT"/>
        <xsd:enumeration value="MIDA"/>
        <xsd:enumeration value="NEHB"/>
        <xsd:enumeration value="Other"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:annotation>
        <xsd:documentation>
    Example reportdescriptions:
    "Standard 12 Lead Report"
    "Standard 12+ Lead Report"
    "Standard 15 Lead Report"
        "12 Lead Report with Mason Likar Lead Placement"
        "12 Lead Report with Alternate Lead Placement"
    "Standard 12 Lead Report; Some Leads Derived"
        "MIDA Derived 12 Lead Report"
        "EASI Derived 12 Lead Report"
    "Standard 12 Lead Report; Representative Beat Display"
    </xsd:documentation>
</xsd:annotation>
<xsd:element name="reportdescription" type="xsd:string"/>
<xsd:element name="reportformat">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="interpretationformat"/>
                        <xsd:element ref="waveformformat"/>
                        <!-- @extendedmeasflag is set "True" if the report format contains extra pages with lead-by-lead
                    measurements, etc (i.e., the "measurement matrix") -->
                </xsd:sequence>
                <xsd:attribute name="extendedmeasflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="printtruncationflag" type="TYPEflag" use="optional"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="interpretationformat" type="TYPEinterpretationformat"/>
```

```
<xsd:element name="waveformformat">
      <xsd:complexType>
            <xsd:sequence>
                  <!-- rows and columns of the main waveform section: -->
                  <xsd:element ref="mainwaveformformat"/>
                  <!-- number of leads in the rhythm waveform section: -->
                  <xsd:element ref="rhythmwaveformformat"/>
            </xsd:sequence>
            <xsd:attribute name="leadsequence" type="TYPEleadsequence" use="required"/>
            <xsd:attribute name="timesequence" type="TYPEtimesequence" use="required"/>
      </xsd:complexType>
</xsd:element>
<xsd:element name="mainwaveformformat">
      <xsd:complexType>
            <xsd:simpleContent>
                  <xsd:extension base="TYPElistofleadname">
                        <xsd:attribute name="nrow" type="xsd:positiveInteger" use="required"/>
                        <xsd:attribute name="ncolumn" type="xsd:positiveInteger" use="required"/>
                        <xsd:attribute name="repbeat" type="TYPEflag" use="optional"/>
                  </xsd:extension>
                  <!-- "repbeat" attribute "True" signifies display of the representative beat waveform for each lead -->
                  <!-- (note that for repbeat display, "timesequence" should be set to "Simultaneous") -->
            </xsd:simpleContent>
      </xsd:complexType>
</xsd:element>
<xsd:element name="rhythmwaveformformat">
      <xsd:complexType>
            <xsd:simpleContent>
                  <xsd:extension base="TYPElistofleadname">
                        <xsd:attribute name="nrhythm" type="xsd:nonNegativeInteger" use="required"/>
                  </xsd:extension>
            </xsd:simpleContent>
      </xsd:complexType>
</xsd:element>
<xsd:simpleType name="TYPEleadsequence">
      <xsd:restriction base="xsd:string">
            <xsd:enumeration value="Standard"/>
            <xsd:enumeration value="Cabrera"/>
      </xsd:restriction>
</xsd:simpleType>
<!-- Continuous means that time increases "continuously" across the ncolumn's of the main waveform section;
```

Simultaneous means that all the columns of the main waveform section occur at the same time -->
```xml
<xsd:simpleType name="TYPEtimesequence">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="Continuous"/>
        <xsd:enumeration value="Simultaneous"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:element name="reportgain">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="amplitudegain"/>
            <xsd:element ref="timegain"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="amplitudegain">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="overallgain"/>
            <xsd:element ref="groupgain" minOccurs="0"/>
            <xsd:element ref="individualleadgain" minOccurs="0"/>
        </xsd:sequence>
        <xsd:attribute name="unit" use="required">
            <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                    <xsd:enumeration value="mm/mv"/>
                </xsd:restriction>
            </xsd:simpleType>
        </xsd:attribute>
    </xsd:complexType>
</xsd:element>
<xsd:element name="overallgain" type="xsd:float"/>
<xsd:element name="groupgain">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:float">
                <xsd:attribute name="leadgroupname" use="required">
                    <xsd:simpleType>
                        <xsd:list itemType="TYPEleadname"/>
                    </xsd:simpleType>
                </xsd:attribute>
```

```xml
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="individualleadgain">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:float">
                    <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="timegain">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:float">
                    <xsd:attribute name="unit" use="required">
                        <xsd:simpleType>
                            <xsd:restriction base="xsd:string">
                                <xsd:enumeration value="mm/s"/>
                            </xsd:restriction>
                        </xsd:simpleType>
                    </xsd:attribute>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="reportbandwidth">
        <xsd:complexType>
            <xsd:sequence>
                <!-- desired high pass frequency cutoff of the displayed waveform data: -->
                <xsd:element ref="highpassfiltersetting"/>
                <!-- desired low pass frequency cutoff of the displayed waveform data: -->
                <xsd:element ref="lowpassfiltersetting"/>
                <!-- the "notch filter" refers to the A/C powerline electromagnetic interference removal filter -->
                <xsd:element ref="notchfiltersetting"/>
                <!-- much of the powerline interference appears at the 3rd harmonic of the powerline frequency... -->
                <xsd:element ref="notchharmonicssetting" minOccurs="0"/>
                <!-- set "True" if the special "artifact" filter should be run on the data before displaying it: -->
                <xsd:element ref="artifactfilterflag" minOccurs="0"/>
```

```xml
<!-- set "True" if a hysteresis filter should be run on the data before displaying it: -->
                <xsd:element ref="hysteresisfilterflag" minOccurs="0"/>
            </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="highpassfiltersetting" type="xsd:float"/>
<xsd:element name="lowpassfiltersetting" type="xsd:positiveInteger"/>
<xsd:element name="notchfiltersetting" type="TYPEacfiltersetting"/>
<xsd:element name="notchharmonicssetting" type="TYPEacharmonicssetting"/>
<xsd:element name="artifactfilterflag" type="TYPEflag"/>
<xsd:element name="hysteresisfilterflag" type="TYPEflag"/>
<!-- multiple copies of the report info can be saved using this element:
    "original" should be set True if this describes the original report settings at time of dataacquisition.
    "userid" could be used to specify the settings desired by a particular user. -->
<xsd:element name="savedreportinfo">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="reportlabel"/>
            <xsd:element ref="reportdescription"/>
            <xsd:element ref="reportformat"/>
            <xsd:element ref="reportgain"/>
            <xsd:element ref="reportbandwidth"/>
            <xsd:element name="other" minOccurs="0" maxOccurs="unbounded">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                            <xsd:attribute name="label" type="xsd:string" use="required"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
        </xsd:sequence>
        <xsd:attribute name="date" type="xsd:date" use="required"/>
        <xsd:attribute name="time" type="xsd:time" use="required"/>
        <xsd:attribute name="original" type="TYPEflag" use="optional"/>
        <xsd:attribute name="userid" type="xsd:string" use="optional"/>
        <xsd:attribute name="other" type="xsd:string" use="optional"/>
    </xsd:complexType>
</xsd:element>
<xsd:simpleType name="TYPEinterpretationformat">
    <xsd:restriction base="xsd:string">
```

```xml
        <xsd:enumeration value="None"/>
        <xsd:enumeration value="Severity only"/>
        <xsd:enumeration value="Short measurements"/>
        <xsd:enumeration value="Extended measurements"/>
        <xsd:enumeration value="Interpretations"/>
        <xsd:enumeration value="Interpretations and reasons"/>
        <xsd:enumeration value="Other"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEacfiltersetting">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="None"/>
        <xsd:enumeration value="50"/>
        <xsd:enumeration value="60"/>
        <xsd:enumeration value="50 60"/>
        <xsd:enumeration value="Other"/>
        <xsd:enumeration value="Unknown"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEacharmonicssetting">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="None"/>
        <xsd:enumeration value="100"/>
        <xsd:enumeration value="150"/>
        <xsd:enumeration value="100 150"/>
        <xsd:enumeration value="120"/>
        <xsd:enumeration value="180"/>
        <xsd:enumeration value="120 180"/>
        <xsd:enumeration value="Other"/>
        <xsd:enumeration value="Unknown"/>
    </xsd:restriction>
</xsd:simpleType>
<!-- end of reportinfo -->
<!-- ========================================================================= -->
<xsd:element name="dataacquisition">
    <xsd:complexType>
        <xsd:sequence>
            <!-- the ECG Management System database id, if different: -->
            <xsd:element name="databaseid" type="xsd:string" minOccurs="0"/>
            <!-- the modality of the ECG acquisition: for example, RESTING, EXERCISE: -->
            <xsd:element name="modality" type="xsd:string" minOccurs="0"/>
```

```xml
                <!-- this describes the data acquisition device: -->
                <xsd:element ref="machine"/>
                <!-- this describes the people & place of acquisition: -->
                <xsd:element ref="acquirer"/>
                <!-- this describes the signal characteristics at time of data acquisition. -->
                <!-- note that this does NOT describe the waveform in this file, -->
                <!--   since it may have been subsequently modified: -->
                <xsd:element ref="signalcharacteristics"/>
            </xsd:sequence>
            <xsd:attribute name="date" type="xsd:date" use="required"/>
            <xsd:attribute name="time" type="xsd:time" use="required"/>
            <xsd:attribute name="statflag" type="TYPEflag" use="optional"/>
            <!-- date & time of ECG acquisition: -->
            <!-- if this is a "Stat" ECG, set to "True": -->
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="machine">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEmachine">
                    <xsd:attribute name="machineid" type="xsd:string" use="optional"/>
                    <xsd:attribute name="detaildescription" type="xsd:string" use="required"/>
                </xsd:extension>
                <!-- this is the serial number or other ID of this particular device: -->
                <!-- this should contain model number and software version: -->
                <!-- for example, "Philips Medical Products:M5000:X.01.00.35" -->
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="acquirer">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="encounterid" minOccurs="0"/>
                <xsd:element name="operator" type="TYPEperson" minOccurs="0"/>
                <xsd:element ref="room" minOccurs="0"/>
                <xsd:element ref="bed" minOccurs="0"/>
                <xsd:element ref="departmentid" minOccurs="0"/>
                <xsd:element ref="departmentname" minOccurs="0"/>
                <xsd:element ref="institutionid" minOccurs="0"/>
                <xsd:element ref="institutionname" minOccurs="0"/>
                <xsd:element ref="facilityid" minOccurs="0"/>
```

```xml
                    <xsd:element ref="facilityname" minOccurs="0"/>
                    <xsd:element name="orderingclinician" type="TYPEperson" minOccurs="0"/>
                    <xsd:element name="fellow" type="TYPEperson" minOccurs="0"/>
                    <xsd:element name="attendingclinician" type="TYPEperson" minOccurs="0"/>
                    <xsd:element name="referringclinician" type="TYPEperson" minOccurs="0"/>
                    <xsd:element name="consultingclinician" type="TYPEperson" minOccurs="0"/>
                </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="encounterid">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="40"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="signalcharacteristics">
        <xsd:complexType>
            <xsd:sequence>
                <!-- sample rate of the digitized signal; samples-per-second: -->
                <xsd:element ref="samplingrate"/>
                <!-- resolution of least-significant-bit, in micro-volts: -->
                <xsd:element ref="resolution"/>
                <!-- this is the high-pass filter frequency cutoff, for example, 0.05 or 0.5Hz, etc: -->
                <xsd:element ref="hipass"/>
                <!-- this is the low-pass filter frequency cutoff, for example, 150, or 100Hz, etc: -->
                <xsd:element ref="lowpass"/>
                <!-- this is the power-line frequency of the data acquisition device, if known: -->
                <xsd:element ref="acsetting" minOccurs="0"/>
                <!-- set "True" if data has been power-line notch filtered: -->
                <xsd:element name="notchfiltered" type="TYPEflag" minOccurs="0"/>
                <!-- a list of notch filter frequencies: eg, "60"  or "60 120 180" -->
                <xsd:element name="notchfilterfreqs" type="xsd:string" minOccurs="0"/>
                <!-- set "True" if data has been filtered by the special artifact filter: -->
                <xsd:element name="artfiltered" type="TYPEflag" minOccurs="0"/>
                <!-- this describes the acquisition in terms of number of wires/font-end type on the patient: -->
                <xsd:element ref="acquisitiontype"/>
                <!-- description if acquisitiontype is "Other": -->
                <xsd:element name="otheracquisitioninfo" type="xsd:string" minOccurs="0"/>
                <!-- bits per sample of the A/D converter: -->
                <xsd:element ref="bitspersample"/>
```

```xml
            <!-- value of any offset wich must be subtracted form the data: -->
            <xsd:element ref="signaloffset"/>
            <!-- "True" is the data is signed: -->
            <xsd:element ref="signalsigned"/>
            <!-- number of channels acquired: -->
            <xsd:element ref="numberchannelsallocated"/>
            <!-- number of channels valid, if known: -->
            <xsd:element ref="numberchannelsvalid"/>
            <!-- description of the electrode placement, if known (for example, Mason-Likar): -->
            <xsd:element ref="electrodeplacement"/>
            <!-- description if electrodeplacement is "Other": -->
            <xsd:element name="otherplacementinfo" type="xsd:string" minOccurs="0"/>
            <!-- list of derived leads, if any (for example, "V1 V3 V5 V6"): -->
            <xsd:element ref="derivedleads" minOccurs="0"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="samplingrate" type="xsd:float"/>
<xsd:element name="resolution" type="xsd:float"/>
<xsd:element name="hipass" type="xsd:float"/>
<xsd:element name="lowpass" type="xsd:positiveInteger"/>
<xsd:element name="acsetting" type="TYPEacsetting"/>
<xsd:simpleType name="TYPEacsetting">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="50"/>
        <xsd:enumeration value="60"/>
        <xsd:enumeration value="Unknown"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:element name="acquisitiontype" type="TYPEacquisitiontype"/>
<xsd:element name="bitspersample" type="xsd:positiveInteger"/>
<xsd:element name="signaloffset" type="xsd:integer"/>
<xsd:element name="signalsigned" type="TYPEflag"/>
<xsd:element name="numberchannelsallocated" type="xsd:nonNegativeInteger"/>
<xsd:element name="numberchannelsvalid" type="xsd:nonNegativeInteger"/>
<xsd:element name="electrodeplacement" type="TYPEelectrodeplacement"/>
<xsd:element name="derivedleads" type="TYPEderivedleads"/>
<xsd:element name="operatorid">
    <xsd:simpleType>
        <xsd:restriction base="xsd:string">
            <xsd:maxLength value="32"/>
```

```
            </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="room">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="bed">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="departmentid">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="departmentname">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="institutionid">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="institutionname">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
```

```xml
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="facilityid">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="facilityname">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:simpleType name="TYPEmachine">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="Unknown"/>
            <xsd:enumeration value="HeartstartMRx"/>
            <xsd:enumeration value="IntelliVue"/>
            <xsd:enumeration value="CMS"/>
            <xsd:enumeration value="PageWriter"/>
            <xsd:enumeration value="PageWriter XL"/>
            <xsd:enumeration value="PageWriter Touch"/>
            <xsd:enumeration value="PageWriter Trim"/>
            <xsd:enumeration value="5600C System"/>
            <xsd:enumeration value="M1730 System"/>
            <xsd:enumeration value="M1729 System"/>
            <xsd:enumeration value="M3700 System"/>
            <xsd:enumeration value="Holter"/>
            <xsd:enumeration value="Telemetry"/>
            <xsd:enumeration value="Stress"/>
            <xsd:enumeration value="Migrated from 5600C System"/>
            <xsd:enumeration value="Other Manufacturer System"/>
            <xsd:enumeration value="Other Manufacturer Device"/>
            <xsd:enumeration value="Other Philips Cardiograph"/>
            <xsd:enumeration value="Other Philips Defibrillator"/>
            <xsd:enumeration value="Other Philips Monitor"/>
```

```xml
                <xsd:enumeration value="Other"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEacquisitiontype">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="MIDA"/>
                <xsd:enumeration value="EASI"/>
                <xsd:enumeration value="3-WIRE"/>
                <xsd:enumeration value="4-WIRE"/>
                <xsd:enumeration value="5-WIRE"/>
                <xsd:enumeration value="6-WIRE"/>
                <xsd:enumeration value="7-WIRE"/>
                <xsd:enumeration value="8-WIRE"/>
                <xsd:enumeration value="9-WIRE"/>
                <xsd:enumeration value="10-WIRE"/>
                <xsd:enumeration value="11-WIRE"/>
                <xsd:enumeration value="12-WIRE"/>
                <xsd:enumeration value="13-WIRE"/>
                <xsd:enumeration value="14-WIRE"/>
                <xsd:enumeration value="15-WIRE"/>
                <xsd:enumeration value="16-WIRE"/>
                <xsd:enumeration value="17-WIRE"/>
                <xsd:enumeration value="18-WIRE"/>
                <xsd:enumeration value="19-WIRE"/>
                <xsd:enumeration value="20-WIRE"/>
                <xsd:enumeration value="21-WIRE"/>
                <xsd:enumeration value="22-WIRE"/>
                <xsd:enumeration value="23-WIRE"/>
                <xsd:enumeration value="24-WIRE"/>
                <xsd:enumeration value="Other"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEelectrodeplacement">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Unknown"/>
                <xsd:enumeration value="STD"/>
                <xsd:enumeration value="STD 12+"/>
                <xsd:enumeration value="MASON-LIKAR"/>
                <xsd:enumeration value="MASON-LIKAR 12+"/>
                <xsd:enumeration value="MODIFIED"/>
                <xsd:enumeration value="MODIFIED 12+"/>
```

```xml
                    <xsd:enumeration value="MIDA"/>
                    <xsd:enumeration value="EASI"/>
                    <xsd:enumeration value="EASI OFF STERNUM"/>
                    <xsd:enumeration value="FRANK"/>
                    <xsd:enumeration value="NEHB"/>
                    <xsd:enumeration value="Other"/>
            </xsd:restriction>
    </xsd:simpleType>
    <xsd:complexType name="TYPEderivedleads">
            <xsd:simpleContent>
                    <xsd:extension base="TYPElistofleadname"/>
            </xsd:simpleContent>
    </xsd:complexType>
    <!-- end of data acquisition -->
    <!-- ======================================================================= -->
    <xsd:element name="patient">
            <xsd:complexType>
                    <xsd:sequence>
                            <xsd:element ref="generalpatientdata"/>
                            <xsd:element ref="patientmedicaldata" minOccurs="0"/>
                    </xsd:sequence>
                    <xsd:attribute name="criteriaversionforpatientdata" type="TYPEcriteriaversion" use="required"/>
                    <xsd:attribute name="customcriteriaversion" type="TYPEcustomcriteriaversion" use="optional"/>
                    <xsd:attribute name="othercriteriaversion" type="xsd:string" use="optional"/>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="generalpatientdata">
            <xsd:complexType>
                    <xsd:sequence>
                            <xsd:element ref="patientid"/>
                            <!-- optional unique patient id for internal use by the ECG management system: -->
                            <xsd:element ref="uniquepatientid" minOccurs="0"/>
                            <!-- optional Medical Record Number, if different from patientid: -->
                            <xsd:element name="MRN" type="xsd:string" minOccurs="0"/>
                            <xsd:element name="secondaryid" type="xsd:string" minOccurs="0"/>
                            <xsd:element ref="name"/>
                            <xsd:element ref="age"/>
                            <xsd:element name="pacestatus" type="TYPEpacestatus"/>
                            <xsd:element ref="sex"/>
                            <xsd:element ref="race" minOccurs="0"/>
                            <xsd:element ref="height" minOccurs="0"/>
```

```xml
                    <xsd:element ref="weight" minOccurs="0"/>
                </xsd:sequence>
            </xsd:complexType>
    </xsd:element>
    <xsd:simpleType name="TYPEageyears">
        <xsd:restriction base="xsd:nonNegativeInteger">
            <xsd:maxInclusive value="199"/>
            <xsd:minInclusive value="1"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEsex">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="Unknown"/>
            <xsd:enumeration value="Male"/>
            <xsd:enumeration value="Female"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:element name="patientmedicaldata">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="bloodpressure" minOccurs="0"/>
                <xsd:element ref="symptom" minOccurs="0" maxOccurs="4"/>
                <xsd:element ref="history" minOccurs="0" maxOccurs="4"/>
                <xsd:element ref="diagnosis" minOccurs="0" maxOccurs="4"/>
                <xsd:element ref="medication" minOccurs="0" maxOccurs="4"/>
                <xsd:element ref="drgcategory" minOccurs="0" maxOccurs="4"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="patientid">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:minLength value="1"/>
                <xsd:maxLength value="40"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="uniquepatientid" type="xsd:string"/>
    <xsd:element name="name">
        <xsd:complexType>
            <xsd:sequence>
```

```
                <xsd:element ref="lastname" minOccurs="0"/>
                <xsd:element ref="firstname" minOccurs="0"/>
                <xsd:element ref="middlename" minOccurs="0"/>
            </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="lastname">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="40"/>
            </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="firstname">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="40"/>
            </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="middlename">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="40"/>
            </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="age">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:choice>
                    <xsd:element ref="dateofbirth" minOccurs="0"/>
                    <xsd:element ref="years" minOccurs="0"/>
                    <xsd:element ref="months" minOccurs="0"/>
                    <xsd:element ref="weeks" minOccurs="0"/>
                    <xsd:element ref="days" minOccurs="0"/>
                    <xsd:element ref="hours" minOccurs="0"/>
                    <xsd:element ref="minutes" minOccurs="0"/>
                </xsd:choice>
            </xsd:sequence>
            <xsd:attribute name="defaultage" type="TYPEageyears" use="optional"/>
```

```xml
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="dateofbirth" type="TYPEdate"/>
    <xsd:element name="years" type="TYPEageyears"/>
    <xsd:element name="months" type="xsd:positiveInteger"/>
    <xsd:element name="weeks" type="xsd:positiveInteger"/>
    <xsd:element name="days" type="xsd:positiveInteger"/>
    <xsd:element name="hours" type="xsd:positiveInteger"/>
    <xsd:element name="minutes" type="xsd:positiveInteger"/>
    <xsd:element name="sex" type="TYPEsex"/>
    <xsd:element name="race">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="code" type="xsd:NMTOKENS" use="optional"/>
                    <xsd:attribute name="id" type="xsd:NMTOKENS" use="required"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="height">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:choice>
                    <xsd:element name="cm" type="TYPEheight"/>
                    <xsd:element name="inch" type="TYPEheight"/>
                </xsd:choice>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="weight">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:choice>
                    <xsd:element name="kg" type="TYPEweight"/>
                    <xsd:element name="lb" type="TYPEweight"/>
                </xsd:choice>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="bloodpressure">
```

```xml
<xsd:complexType>
	<xsd:sequence>
		<xsd:element ref="systolic"/>
		<xsd:element ref="diastolic"/>
	</xsd:sequence>
</xsd:complexType>
</xsd:element>
<xsd:element name="systolic">
	<xsd:complexType>
		<xsd:sequence>
			<xsd:element name="mmHg" type="TYPEbp"/>
		</xsd:sequence>
	</xsd:complexType>
</xsd:element>
<xsd:element name="diastolic">
	<xsd:complexType>
		<xsd:sequence>
			<xsd:element name="mmHg" type="TYPEbp"/>
		</xsd:sequence>
	</xsd:complexType>
</xsd:element>
<xsd:element name="symptom">
	<xsd:complexType>
		<xsd:simpleContent>
			<xsd:extension base="xsd:string">
				<xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
				<xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
				<xsd:attribute name="value" type="xsd:string" use="optional"/>
			</xsd:extension>
		</xsd:simpleContent>
	</xsd:complexType>
</xsd:element>
<xsd:element name="history">
	<xsd:complexType>
		<xsd:simpleContent>
			<xsd:extension base="xsd:string">
				<xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
				<xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
				<xsd:attribute name="value" type="xsd:string" use="optional"/>
			</xsd:extension>
		</xsd:simpleContent>
```

```
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="diagnosis">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="xsd:string">
                        <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                        <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
                        <xsd:attribute name="value" type="xsd:string" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="medication">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="xsd:string">
                        <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                        <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
                        <xsd:attribute name="value" type="xsd:string" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="pt_race">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="xsd:string">
                        <xsd:attribute name="code" type="xsd:NMTOKENS" use="optional"/>
                        <xsd:attribute name="id" type="xsd:NMTOKENS" use="required"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="dx">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="xsd:string">
                        <xsd:attribute name="code" type="xsd:NMTOKEN" use="required"/>
                        <xsd:attribute name="id" type="xsd:NMTOKEN" use="optional"/>
                    </xsd:extension>
```

```
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="rx">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="code" type="xsd:NMTOKEN" use="required"/>
                    <xsd:attribute name="id" type="xsd:NMTOKEN" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <!-- end of patient -->
    <!-- =========================================================================== -->
    <xsd:element name="internalmeasurements">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="crossleadmeasurements" minOccurs="0"/>
                <xsd:element ref="groupmeasurements" minOccurs="0"/>
                <xsd:element ref="leadmeasurements" minOccurs="0"/>
                <xsd:element ref="configsettings" minOccurs="0"/>
            </xsd:sequence>
            <xsd:attribute name="date" type="xsd:date" use="required"/>
            <xsd:attribute name="time" type="xsd:time" use="required"/>
            <xsd:attribute name="measurementversion" type="TYPEmeasurementversion" use="required"/>
            <xsd:attribute name="custommeasurementversion" type="TYPEcustommeasurementversion" use="optional"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:simpleType name="TYPEmeasurementversion">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="7"/>
            <xsd:enumeration value="8"/>
            <xsd:enumeration value="9"/>
            <xsd:enumeration value="A"/>
            <xsd:enumeration value="B"/>
            <xsd:enumeration value="C"/>
            <xsd:enumeration value="D"/>
            <xsd:enumeration value="E"/>
            <xsd:enumeration value="F"/>
            <xsd:enumeration value="10"/>
```

```
                <xsd:enumeration value="11"/>
                <xsd:enumeration value="12"/>
                <xsd:enumeration value="13"/>
                <xsd:enumeration value="14"/>
                <xsd:enumeration value="15"/>
                <xsd:enumeration value="Custom"/>
                <xsd:enumeration value="Other Manufacturer"/>
                <xsd:enumeration value="Other"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:element name="crossleadmeasurements">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:group ref="crossleadmeasurements.elements"/>
                </xsd:sequence>
                <xsd:attribute name="fixedmultpflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="multptestvalidflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="qrslikeartfflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="pacebeatmeasflag" type="TYPEflag" use="optional"/>
        </xsd:complexType>
</xsd:element>
<xsd:group name="crossleadmeasurements.elements">
        <xsd:sequence>
                <!-- if any pacepulses are detected, this should be a list of leads on which the pacepulse detector was run; -->
                <!-- whether or not that particular lead detected any pace pulses: -->
                <!-- (some devices run the pace pulse detector on all leads, others run it only on some leads) -->
                <xsd:element ref="pacedetectleads" minOccurs="0"/>
                <xsd:element ref="pacepulses" minOccurs="0"/>
                <xsd:element ref="pacemode" minOccurs="0"/>
                <xsd:element ref="pacemalf" minOccurs="0"/>
                <xsd:element ref="pacemisc" minOccurs="0"/>
                <xsd:element ref="ectopicrhythm" minOccurs="0"/>
                <xsd:element ref="qtintdispersion" minOccurs="0"/>
                <xsd:element ref="numberofcomplexes" minOccurs="0"/>
                <xsd:element ref="numberofgroups" minOccurs="0"/>
                <xsd:element ref="beatclassification" minOccurs="0"/>
                <xsd:element ref="qamessagecodes" minOccurs="0"/>
                <xsd:element ref="qaactioncode" minOccurs="0"/>
                <xsd:element ref="pfrontaxis" minOccurs="0"/>
                <xsd:element ref="phorizaxis" minOccurs="0"/>
                <xsd:element ref="i40frontaxis" minOccurs="0"/>
```

```xml
<xsd:element ref="i40horizaxis" minOccurs="0"/>
<xsd:element ref="qrsfrontaxis" minOccurs="0"/>
<xsd:element ref="qrshorizaxis" minOccurs="0"/>
<xsd:element ref="t40frontaxis" minOccurs="0"/>
<xsd:element ref="t40horizaxis" minOccurs="0"/>
<xsd:element ref="stfrontaxis" minOccurs="0"/>
<xsd:element ref="sthorizaxis" minOccurs="0"/>
<xsd:element ref="tfrontaxis" minOccurs="0"/>
<xsd:element ref="thorizaxis" minOccurs="0"/>
<xsd:element ref="atrialrate" minOccurs="0"/>
<xsd:element ref="lowventrate" minOccurs="0"/>
<xsd:element ref="meanventrate" minOccurs="0"/>
<xsd:element ref="highventrate" minOccurs="0"/>
<xsd:element ref="meanprint" minOccurs="0"/>
<xsd:element ref="meanprseg" minOccurs="0"/>
<xsd:element ref="meanqrsdur" minOccurs="0"/>
<xsd:element ref="meanqtint" minOccurs="0"/>
<xsd:element ref="meanqtc" minOccurs="0"/>
<xsd:element ref="deltawavecount" minOccurs="0"/>
<xsd:element ref="deltawavepercent" minOccurs="0"/>
<xsd:element ref="bigeminycount" minOccurs="0"/>
<xsd:element ref="bigeminystring" minOccurs="0"/>
<xsd:element ref="trigeminycount" minOccurs="0"/>
<xsd:element ref="trigeminystring" minOccurs="0"/>
<xsd:element ref="wenckcount" minOccurs="0"/>
<xsd:element ref="wenckstring" minOccurs="0"/>
<xsd:element ref="flutterfibcount" minOccurs="0"/>
<!-- additional algorithm variables: -->
<!-- lead reversal code: -->
<xsd:element name="leadreversalcode" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- atrial rhythm code: -->
<xsd:element name="atrialrhythm" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- atrial rate (beats per minute) from the power spectrum/ autocorrelation of the QRST residual: -->
<xsd:element name="atrialratepowerspect" type="TYPErate" minOccurs="0"/>
<!-- ventricular rhythm code -->
<xsd:element name="ventrhythm" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- percentage of beats with random RR interval variation: -->
<xsd:element name="randomrrpercent" type="TYPEpercent" minOccurs="0"/>
<!-- percentage of beats with regular RR interals: -->
<xsd:element name="regularrrpercent" type="TYPEpercent" minOccurs="0"/>
<!-- percentage of beats in the largest RR interval cluster: -->
```

```xml
<xsd:element name="biggestrrgrouppercent" type="TYPEpercent" minOccurs="0"/>
<!-- variation (std.dev./mean) of RR intervals in the largest RR cluster: -->
<xsd:element name="biggestrrgroupvar" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- total number of RR interval groups or clusters: -->
<xsd:element name="nrrgroups" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- height of RR interval ACF peak in percent: -->
<xsd:element name="bigemrrintvlacf" type="TYPEpercent" minOccurs="0"/>
<!-- height of RR interval ACF peak in percent: -->
<xsd:element name="trigemrrintvlacf" type="TYPEpercent" minOccurs="0"/>
<!-- atrial fibrillation (Afib) frequency from the power spectral density (PSD): -->
<xsd:element name="fibfreqmhz" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- amplitude of afib-peak frequency component of the PSD: -->
<xsd:element name="fibampnv" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- 10dB width of the afib-peak frequency component of the PSD: -->
<xsd:element name="fibwidthmhz" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- median frequency from the PSD, half power above, half power below -->
<xsd:element name="fibmedianfreqmhz" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- cycle length taken from the atrial signal autocorrelation function (ACF): -->
<xsd:element name="afltcyclelen" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- height of percent-normalized cycle-length ACF peak, 0-100%: -->
<xsd:element name="afltacfpeak" type="TYPEpercent" minOccurs="0"/>
<!-- width of cycle-length ACF peak in millisec: -->
<xsd:element name="afltacfpeakwidth" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- percentage of all P waves or F waves that have the same shape: -->
<xsd:element name="constantpshapepct" type="TYPEpercent" minOccurs="0"/>
<!-- error of P to P intervals compared to avg. PP interval: -->
<xsd:element name="atrialrateirregpct" type="TYPEpercent" minOccurs="0"/>
<!-- vector loop measurements: -->
<xsd:group ref="vectorloopmxs.elements" minOccurs="0"/>
<!-- preexcitation code: -->
<xsd:element name="preexcitation" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- global beat annotations: -->
<xsd:element ref="beats" minOccurs="0"/>
<!-- reserved for future use: -->
<xsd:element ref="namedmeasurement" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:group>
```

```
<xsd:element name="qamessagecodes">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="qamessagecode" minOccurs="0" maxOccurs="4"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="qamessagecode" type="TYPEmessagecode"/>
<xsd:simpleType name="TYPEmessagecode">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="Acceptable trace"/>
                <xsd:enumeration value="Check QA message history"/>
                <xsd:enumeration value="Overrange"/>
                <xsd:enumeration value="Artifact"/>
                <xsd:enumeration value="Baseline wander"/>
                <xsd:enumeration value="Missing lead(s)"/>
                <xsd:enumeration value="Phone noise"/>
                <xsd:enumeration value="AC interference"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:element name="qaactioncode" type="TYPEactioncode"/>
<xsd:simpleType name="TYPEactioncode">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="ECG OK"/>
                <xsd:enumeration value="Poor ECG, retry if possible"/>
        </xsd:restriction>
</xsd:simpleType>
<!-- start of vector loop measurement definitions: ============== -->
<xsd:group name="vectorloopmxs.elements">
        <xsd:sequence>
                <!-- Transverse (for example, Horizontal) Plane  -->
                <!-- p-wave  -->
                <xsd:element name="transpcwrot" type="TYPEcwRot" minOccurs="0"/>
                <xsd:element name="transpinitangle" type="TYPEangle" minOccurs="0"/>
                <xsd:element name="transpinitmag" type="TYPEmag" minOccurs="0"/>
                <xsd:element name="transpmaxangle" type="TYPEangle" minOccurs="0"/>
                <xsd:element name="transpmaxmag" type="TYPEmag" minOccurs="0"/>
                <xsd:element name="transptermangle" type="TYPEangle" minOccurs="0"/>
                <xsd:element name="transptermmag" type="TYPEmag" minOccurs="0"/>
                <!-- qrs-wave  -->
```

```xml
<xsd:element name="transqrscwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="transqrsinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transqrsinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="transqrsmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transqrsmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="transqrstermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transqrstermmag" type="TYPEmag" minOccurs="0"/>
<!-- t-wave -->
<xsd:element name="transtcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="transtinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transtinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="transtmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transtmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="transttermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transttermmag" type="TYPEmag" minOccurs="0"/>
<!-- Frontal Plane -->
<!-- p-wave -->
<xsd:element name="frontpcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="frontpinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontpinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="frontpmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontpmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="frontptermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontptermmag" type="TYPEmag" minOccurs="0"/>
<!-- qrs-wave -->
<xsd:element name="frontqrscwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="frontqrsinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontqrsinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="frontqrsmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontqrsmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="frontqrstermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontqrstermmag" type="TYPEmag" minOccurs="0"/>
<!-- t-wave -->
<xsd:element name="fronttcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="fronttinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="fronttinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="fronttmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="fronttmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="frontttermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontttermmag" type="TYPEmag" minOccurs="0"/>
<!-- Sagittal Plane -->
```

```
<!-- p-wave  -->
<xsd:element name="sagpcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="sagpinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagpinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagpmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagpmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagptermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagptermmag" type="TYPEmag" minOccurs="0"/>
<!-- qrs-wave  -->
<xsd:element name="sagqrscwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="sagqrsinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagqrsinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagqrsmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagqrsmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagqrstermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagqrstermmag" type="TYPEmag" minOccurs="0"/>
<!-- t-wave  -->
<xsd:element name="sagtcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="sagtinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagtinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagtmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagtmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagttermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagttermmag" type="TYPEmag" minOccurs="0"/>
        </xsd:sequence>
</xsd:group>
<!-- score between -100(counter-clockwise) and 100(clockwise) indicating confidence: -->
<xsd:simpleType name="TYPEcwRot1">
        <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="100"/>
                <xsd:minInclusive value="-100"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEcwRot">
        <xsd:union memberTypes="TYPEcwRot1 TYPEinvalidPlus"/>
</xsd:simpleType>
<!-- vector angle (degrees): -->
<xsd:simpleType name="TYPEangle1">
        <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="360"/>
                <xsd:minInclusive value="-360"/>
```

```
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEangle">
                <xsd:union memberTypes="TYPEangle1 TYPEinvalidPlus"/>
        </xsd:simpleType>
        <!-- vector magnitude (microvolts): -->
        <xsd:simpleType name="TYPEmag1">
                <xsd:restriction base="xsd:nonNegativeInteger"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEmag">
                <xsd:union memberTypes="TYPEmag1 TYPEinvalidPlus"/>
        </xsd:simpleType>
        <!-- end of vector loop measurements definition =============== -->
        <!-- ================================================-->
        <xsd:element name="beats">
                <xsd:complexType>
                        <xsd:sequence>
                                <xsd:element name="beat" minOccurs="0" maxOccurs="unbounded">
                                        <xsd:complexType>
                                                <xsd:sequence>
                                                        <xsd:element name="group" type="xsd:nonNegativeInteger"/>
                                                        <xsd:element name="pon" type="TYPEfiducial" minOccurs="0"/>
                                                        <xsd:element name="poff" type="TYPEfiducial" minOccurs="0"/>
                                                        <xsd:element name="qon" type="TYPEfiducial" minOccurs="0"/>
                                                        <xsd:element name="qoff" type="TYPEfiducial" minOccurs="0"/>
                                                        <xsd:element name="ton" type="TYPEfiducial" minOccurs="0"/>
                                                        <xsd:element name="toff" type="TYPEfiducial" minOccurs="0"/>
                                                </xsd:sequence>
                                        </xsd:complexType>
                                </xsd:element>
                        </xsd:sequence>
                </xsd:complexType>
        </xsd:element>
        <!-- ============ ===================================-->
        <xsd:element name="namedmeasurement">
                <xsd:complexType>
                        <xsd:sequence>
                                <xsd:element name="name" type="xsd:string"/>
                                <xsd:element name="value" type="xsd:string"/>
                        </xsd:sequence>
                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
```

```
                    <xsd:attribute name="uneditedvalue" type="xsd:string" use="optional"/>
            </xsd:complexType>
    </xsd:element>
    <!-- end of crossleadmeasurements.elements ================================ -->
    <xsd:element name="groupmeasurements">
            <xsd:complexType>
                    <xsd:sequence>
                            <xsd:element ref="groupmeasurement" minOccurs="0" maxOccurs="unbounded"/>
                    </xsd:sequence>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="groupmeasurement">
            <xsd:complexType>
                    <xsd:sequence>
                            <xsd:group ref="groupmeasurement.elements"/>
                    </xsd:sequence>
                    <xsd:attribute name="groupnumber" use="required">
                            <xsd:simpleType>
                                    <xsd:restriction base="xsd:nonNegativeInteger">
                                            <xsd:maxInclusive value="20"/>
                                            <xsd:minInclusive value="0"/>
                                    </xsd:restriction>
                            </xsd:simpleType>
                    </xsd:attribute>
                    <xsd:attribute name="interpflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="sinusflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="prprogflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="wenckflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="bigflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="trigflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="aberrantflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="multptestflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="qrsmeasflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="atrialpaceflag" type="TYPEflagUnk" use="optional"/>
                    <xsd:attribute name="ventdualpaceflag" type="TYPEflag" use="optional"/>
            </xsd:complexType>
    </xsd:element>
    <xsd:group name="groupmeasurement.elements">
            <xsd:sequence>
                    <xsd:element ref="membercount"/>
                    <xsd:element ref="memberpercent" minOccurs="0"/>
```

```xml
<xsd:element ref="longestrun" minOccurs="0"/>
<xsd:element ref="meanqrsdur" minOccurs="0"/>
<xsd:element ref="lowventrate" minOccurs="0"/>
<xsd:element ref="meanventrate" minOccurs="0"/>
<xsd:element ref="highventrate" minOccurs="0"/>
<xsd:element ref="ventratestddev" minOccurs="0"/>
<xsd:element ref="meanrrint" minOccurs="0"/>
<xsd:element ref="atrialrate" minOccurs="0"/>
<xsd:element ref="atrialratestddev" minOccurs="0"/>
<xsd:element ref="avgpcount" minOccurs="0"/>
<xsd:element ref="notavgpbeats" minOccurs="0"/>
<xsd:element ref="lowprint" minOccurs="0"/>
<xsd:element ref="meanprint" minOccurs="0"/>
<xsd:element ref="highprint" minOccurs="0"/>
<xsd:element ref="printstddev" minOccurs="0"/>
<xsd:element ref="meanprseg" minOccurs="0"/>
<xsd:element ref="meanqtint" minOccurs="0"/>
<xsd:element ref="meanqtseg" minOccurs="0"/>
<xsd:element ref="comppausecount" minOccurs="0"/>
<!-- reserved for future use: -->
<xsd:element ref="namedmeasurement" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
</xsd:group>
<!-- ============================================== -->
<xsd:element name="leadmeasurements">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="leadmeasurement" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="leadmeasurement">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="pacepulses" minOccurs="0"/>
                        <xsd:group ref="leadmeasurement.elements"/>
                </xsd:sequence>
                <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
                <xsd:attribute name="pexistflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="pmeasflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="pnotchflag" type="TYPEflag" use="optional"/>
```

```
                <xsd:attribute name="qrsexistflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="qrsspikeflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="qrsmeasflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="qrsnotchflag" type="TYPEnotch" use="optional"/>
                <xsd:attribute name="qrsdeltaflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="stexistflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="stmeasflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="texistflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="tmeasflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="tnotchflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="atrialpaceflag" type="TYPEflagUnk" use="optional"/>
                <xsd:attribute name="ventpaceflag" type="TYPEflag" use="optional"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:group name="leadmeasurement.elements">
        <xsd:sequence>
                <xsd:element ref="leadqualitystates" minOccurs="0"/>
                <xsd:element ref="pamp" minOccurs="0"/>
                <xsd:element ref="pdur" minOccurs="0"/>
                <xsd:element ref="parea" minOccurs="0"/>
                <xsd:element ref="ppamp" minOccurs="0"/>
                <xsd:element ref="ppdur" minOccurs="0"/>
                <xsd:element ref="ppppdur" minOccurs="0"/>
                <xsd:element ref="pparea" minOccurs="0"/>
                <xsd:element ref="pppparea" minOccurs="0"/>
                <xsd:element ref="qamp" minOccurs="0"/>
                <xsd:element ref="qdur" minOccurs="0"/>
                <xsd:element ref="ramp" minOccurs="0"/>
                <xsd:element ref="rdur" minOccurs="0"/>
                <xsd:element ref="samp" minOccurs="0"/>
                <xsd:element ref="sdur" minOccurs="0"/>
                <xsd:element ref="rpamp" minOccurs="0"/>
                <xsd:element ref="rpdur" minOccurs="0"/>
                <xsd:element ref="spamp" minOccurs="0"/>
                <xsd:element ref="spdur" minOccurs="0"/>
                <xsd:element ref="vat" minOccurs="0"/>
                <xsd:element ref="qrsppk" minOccurs="0"/>
                <xsd:element ref="qrsdur" minOccurs="0"/>
                <xsd:element ref="qrsarea" minOccurs="0"/>
                <xsd:element ref="ston" minOccurs="0"/>
                <xsd:element ref="stmid" minOccurs="0"/>
```

```xml
<xsd:element ref="st80" minOccurs="0"/>
<xsd:element ref="stend" minOccurs="0"/>
<xsd:element ref="stdur" minOccurs="0"/>
<xsd:element ref="stslope" minOccurs="0"/>
<xsd:element ref="stshape" minOccurs="0"/>
<xsd:element ref="tamp" minOccurs="0"/>
<xsd:element ref="tdur" minOccurs="0"/>
<xsd:element ref="tarea" minOccurs="0"/>
<xsd:element ref="tpamp" minOccurs="0"/>
<xsd:element ref="tptpdur" minOccurs="0"/>
<xsd:element ref="tpdur" minOccurs="0"/>
<xsd:element ref="tparea" minOccurs="0"/>
<xsd:element ref="tptparea" minOccurs="0"/>
<xsd:element ref="print" minOccurs="0"/>
<xsd:element ref="prseg" minOccurs="0"/>
<xsd:element ref="qtint" minOccurs="0"/>
<xsd:element ref="beats" minOccurs="0"/>
<!-- reserved for future use: -->
<xsd:element ref="namedmeasurement" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:group>
<!-- algorithm configuration settings needed if the ECG is ever re-analyzed by the diagnostic algorithm: -->
<xsd:element name="configsettings">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="bradyhrlimit" type="TYPEintegerORnull" minOccurs="0"/>
            <xsd:element name="asianlvhcriteria" type="TYPEflag" minOccurs="0"/>
            <xsd:element name="qualitystmts" type="TYPEintegerORnull" minOccurs="0"/>
            <xsd:element name="sensitivity" type="TYPEintegerORnull" minOccurs="0"/>
            <xsd:element ref="configsetting" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<!-- for future use: -->
<xsd:element name="configsetting">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="name" type="xsd:string"/>
            <xsd:element name="value" type="xsd:string"/>
        </xsd:sequence>
    </xsd:complexType>
```

```
</xsd:element>
<xsd:element name="leadqualitystates">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="inops" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="saturations" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="baseartifacts" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="acartifacts" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="muscleartifacts" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
        <xsd:attribute name="qrsclippingflag" type="TYPEflag" use="required"/>
        <xsd:attribute name="overrangeflag" type="TYPEflag" use="required"/>
        <xsd:attribute name="measuredflag" type="TYPEflag" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="inops">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="inop" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="saturations">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="saturation" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="baseartifacts">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="baseartifact" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
        <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="acartifacts">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="acartifact" minOccurs="0" maxOccurs="unbounded"/>
```

```
            </xsd:sequence>
            <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="muscleartifacts">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="muscleartifact" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
            <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="inop">
        <xsd:complexType>
            <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
            <xsd:attribute name="duration" type="TYPEduration" use="required"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="saturation">
        <xsd:complexType>
            <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
            <xsd:attribute name="duration" type="TYPEduration" use="required"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="baseartifact">
        <xsd:complexType>
            <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
            <xsd:attribute name="duration" type="TYPEduration" use="required"/>
            <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="acartifact">
        <xsd:complexType>
            <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
            <xsd:attribute name="duration" type="TYPEduration" use="required"/>
            <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="muscleartifact">
        <xsd:complexType>
            <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
```

```xml
                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
            </xsd:complexType>
        </xsd:element>
        <!-- ================================================================================= -->
        <xsd:element name="interpretations">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element ref="interpretation" maxOccurs="unbounded"/>
                </xsd:sequence>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="interpretation">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element ref="serialcomparison" minOccurs="0"/>
                    <xsd:element ref="interpretationdatastructure" minOccurs="0"/>
                    <xsd:element ref="globalmeasurements" minOccurs="0"/>
                    <xsd:element ref="mdsignatureline" minOccurs="0"/>
                    <!-- name with @id of the most recent confirming clinician (with @date and @time of confirmation) -->
                    <xsd:element name="confirmingclinician" type="TYPEpersonwithdatetime" minOccurs="0"/>
                    <xsd:element ref="severity" minOccurs="0"/>
                    <xsd:element ref="statement" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="date" type="xsd:date" use="required"/>
                <xsd:attribute name="time" type="xsd:time" use="required"/>
                <xsd:attribute name="criteriaversion" type="TYPEcriteriaversion" use="required"/>
                <xsd:attribute name="criteriaversiondate" type="xsd:date" use="optional"/>
                <xsd:attribute name="customcriteriaversion" type="TYPEcustomcriteriaversion" use="optional"/>
                <xsd:attribute name="othercriteriaversion" type="xsd:string" use="optional"/>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="serialcomparison">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element name="previousecg" minOccurs="0">
                        <xsd:complexType>
                            <xsd:sequence>
                                <xsd:element name="documentname" type="xsd:string"/>
                                <xsd:element ref="severity"/>
                                <xsd:element name="mdsignatureline" type="xsd:string"/>
```

```xml
                    <xsd:element name="compareinfostatement" type="xsd:string"/>
                </xsd:sequence>
                <xsd:attribute name="date" type="xsd:date" use="required"/>
                <xsd:attribute name="time" type="xsd:time" use="required"/>
                <xsd:attribute name="status" type="TYPErestingecgstatus" use="required"/>
            </xsd:complexType>
        </xsd:element>
    </xsd:sequence>
    <xsd:attribute name="date" type="xsd:date" use="required"/>
    <xsd:attribute name="time" type="xsd:time" use="required"/>
    <xsd:attribute name="scalgversion" type="xsd:string" use="required"/>
    <xsd:attribute name="scalgversiondate" type="xsd:date" use="optional"/>
    <xsd:attribute name="scstatementversion" type="xsd:string" use="optional"/>
    <xsd:attribute name="scstatementversiondate" type="xsd:date" use="optional"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="globalmeasurements">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="heartrate">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPErate">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPErate" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="rrint">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEduration">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="atrialrate" minOccurs="0">
                <xsd:complexType>
```

```xml
            <xsd:simpleContent>
                <xsd:extension base="TYPErate">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPErate" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="pdur" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEduration">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="print">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEduration">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="qonset">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEfiducial">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEfiducial" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="qrsdur">
        <xsd:complexType>
            <xsd:simpleContent>
```

```xml
                    <xsd:extension base="TYPEduration">
                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                        <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="tonset" minOccurs="0">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="TYPEfiducial">
                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                        <xsd:attribute name="uneditedvalue" type="TYPEfiducial" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="qtint">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="TYPEduration">
                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                        <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="qtcb">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="TYPEduration">
                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                        <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="qtcf" minOccurs="0">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="TYPEduration">
```

```xml
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="qtco" minOccurs="0" maxOccurs="unbounded">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEduration">
                    <xsd:attribute name="methodname" type="xsd:string" use="required"/>
                    <xsd:attribute name="label" type="xsd:string" use="required"/>
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<!-- list of leads ordered by stability of the T wave offset measurement on that lead; most stable comes first -->
<xsd:element name="toffsetstabilityrank" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPElistofleadname"/>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="pfrontaxis">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="i40frontaxis" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
```

```xml
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="t40frontaxis" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="qrsfrontaxis">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="stfrontaxis" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="tfrontaxis">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
```

```
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="phorizaxis" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="i40horizaxis" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="t40horizaxis" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="qrshorizaxis" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
```

```
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="sthorizaxis" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="thorizaxis" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="TYPEaxis">
                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <!-- reserved for future use: -->
    <xsd:element ref="namedmeasurement" minOccurs="0" maxOccurs="unbounded"/>
</xsd:sequence>
<xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
<!-- globalmeasurements @editedflag will be "True" if ANY global measurement has been edited -->
        </xsd:complexType>
</xsd:element>
<!-- the ECG is confirmed by, or for, a confirming clinician;
        the element holds the person's ID (for example, logname or UPIN);
                @date of the confirmation
                @time of the confirmation -->
<xsd:simpleType name="TYPEcriteriaversion">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="01"/>
        <xsd:enumeration value="02"/>
        <xsd:enumeration value="03"/>
        <xsd:enumeration value="04"/>
        <xsd:enumeration value="05"/>
```

```xml
<xsd:enumeration value="06"/>
<xsd:enumeration value="07"/>
<xsd:enumeration value="08"/>
<xsd:enumeration value="09"/>
<xsd:enumeration value="0A"/>
<xsd:enumeration value="0B"/>
<xsd:enumeration value="0C"/>
<xsd:enumeration value="0D"/>
<xsd:enumeration value="0E"/>
<xsd:enumeration value="0F"/>
<xsd:enumeration value="10"/>
<xsd:enumeration value="11"/>
<xsd:enumeration value="12"/>
<xsd:enumeration value="13"/>
<xsd:enumeration value="14"/>
<xsd:enumeration value="15"/>
<xsd:enumeration value="16"/>
<xsd:enumeration value="17"/>
<xsd:enumeration value="18"/>
<xsd:enumeration value="19"/>
<xsd:enumeration value="1A"/>
<xsd:enumeration value="P2"/>
<xsd:enumeration value="P3"/>
<xsd:enumeration value="P4"/>
<xsd:enumeration value="H0"/>
<xsd:enumeration value="H8"/>
<xsd:enumeration value="T0"/>
<xsd:enumeration value="T8"/>
<xsd:enumeration value="V8"/>
<xsd:enumeration value="S9"/>
<xsd:enumeration value="None"/>
<xsd:enumeration value="Unknown"/>
<xsd:enumeration value="Custom"/>
<xsd:enumeration value="Other"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:element name="severity">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="code" type="xsd:string" use="optional"/>
```

```xml
                        <xsd:attribute name="id" type="xsd:nonNegativeInteger" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="interpretationdatastructure">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element ref="statementcomponents" minOccurs="0"/>
                </xsd:sequence>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="modifiers">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element name="modifier" minOccurs="0" maxOccurs="3">
                        <xsd:complexType>
                            <xsd:simpleContent>
                                <xsd:extension base="xsd:string">
                                    <xsd:attribute name="numericcode" type="xsd:nonNegativeInteger" use="required"/>
                                    <xsd:attribute name="modifiercode" type="xsd:string" use="required"/>
                                    <xsd:attribute name="added" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="deleted" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
                                </xsd:extension>
                            </xsd:simpleContent>
                        </xsd:complexType>
                    </xsd:element>
                </xsd:sequence>
                <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="scmodifiers">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element name="scmodifier" minOccurs="0">
                        <xsd:complexType>
                            <xsd:simpleContent>
                                <xsd:extension base="xsd:string">
                                    <xsd:attribute name="scnumericcode" type="xsd:nonNegativeInteger" use="required"/>
                                    <xsd:attribute name="scmodifiercode" type="xsd:string" use="required"/>
```

```
                            <xsd:attribute name="added" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="deleted" type="TYPEflag" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
        </xsd:sequence>
        <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="variables">
    <xsd:complexType>
        <xsd:sequence minOccurs="0" maxOccurs="4">
            <xsd:choice>
                <xsd:element ref="numericvalue"/>
                <xsd:element ref="listofECGlead"/>
                <xsd:element ref="groupofECGlead"/>
            </xsd:choice>
        </xsd:sequence>
        <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="numericvalue">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:string">
                <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
                <xsd:attribute name="ndigits" type="xsd:nonNegativeInteger" use="required"/>
                <xsd:attribute name="nprecision" type="xsd:nonNegativeInteger" use="required"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="unparsedstatement">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="lhsstatement" type="xsd:string"/>
            <xsd:element name="rhsstatement" type="xsd:string"/>
        </xsd:sequence>
        <xsd:attribute name="statementnumber" type="xsd:nonNegativeInteger" use="required"/>
        <xsd:attribute name="code" type="xsd:string" use="required"/>
        <xsd:attribute name="format" type="TYPEformat" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="codedstatement">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="modifiers"/>
            <xsd:element ref="scmodifiers"/>
            <xsd:element ref="variables"/>
            <xsd:element ref="unparsedstatement"/>
        </xsd:sequence>
        <xsd:attribute name="source" type="TYPEcodedstatementsource" use="required"/>
        <xsd:attribute name="subtype" type="TYPEstatementsubtype" use="required"/>
        <xsd:attribute name="deleted" type="TYPEflag" use="optional"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="uncodedstatement">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:string">
                <xsd:attribute name="source" type="TYPEuncodedstatementsource" use="required"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="qualitystatement">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="modifiers"/>
            <xsd:element ref="variables"/>
            <xsd:element ref="unparsedstatement"/>
        </xsd:sequence>
        <xsd:attribute name="source" type="TYPEqualitystatementsource" use="required"/>
```

```
                <xsd:attribute name="subtype" type="TYPEstatementsubtype" use="required"/>
                <xsd:attribute name="deleted" type="TYPEflag" use="optional"/>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="remarkstatement">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="xsd:string">
                        <xsd:attribute name="source" type="TYPEremarkstatementsource" use="required"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="statementcomponents">
            <xsd:complexType>
                <xsd:sequence minOccurs="0" maxOccurs="unbounded">
                    <xsd:choice>
                        <xsd:element ref="codedstatement"/>
                        <xsd:element ref="uncodedstatement"/>
                        <xsd:element ref="qualitystatement"/>
                        <xsd:element ref="remarkstatement"/>
                    </xsd:choice>
                </xsd:sequence>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="statement">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element ref="statementcode"/>
                    <xsd:element ref="leftstatement"/>
                    <xsd:element ref="rightstatement"/>
                </xsd:sequence>
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="statementcode" type="xsd:string"/>
    <xsd:element name="leftstatement" type="xsd:string"/>
    <xsd:element name="rightstatement" type="xsd:string"/>
    <xsd:simpleType name="TYPEstatementsource">
            <xsd:restriction base="xsd:string">
                <xsd:whiteSpace value="collapse"/>
```

```xml
            <xsd:enumeration value=""/>
            <xsd:enumeration value="Analysis program"/>
            <xsd:enumeration value="Quality monitor"/>
            <xsd:enumeration value="Serial comparison"/>
            <xsd:enumeration value="Editor"/>
            <xsd:enumeration value="Migration"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEstatementsubtype">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="Analysis"/>
            <xsd:enumeration value="Serial comparison"/>
            <xsd:enumeration value="Other"/>
            <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEunparsedstatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEcodedstatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEuncodedstatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEqualitystatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEremarkstatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEformat">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="Narrow"/>
            <xsd:enumeration value="Wide"/>
        </xsd:restriction>
</xsd:simpleType>
<!-- end of interpretations -->
<!-- ========================================================================= -->
<xsd:element name="waveforms">
        <xsd:complexType>
```

```
<xsd:sequence>
    <!-- waveforms in this file: -->
    <xsd:element ref="parsedwaveforms" minOccurs="0"/>
    <!-- waveforms external to this file: -->
    <xsd:element ref="unparsedwaveforms" minOccurs="0"/>
    <!-- individual lead waveforms in this file: -->
    <xsd:element ref="leadwaveforms" minOccurs="0" maxOccurs="unbounded"/>
    <!-- vector waveforms in this file: -->
    <xsd:element ref="vcgs" minOccurs="0"/>
    <!-- representative beat waveforms in this file: -->
    <xsd:element ref="repbeats" minOccurs="0"/>
    <!-- waveform annotations: -->
    <xsd:element ref="annotations" minOccurs="0"/>
</xsd:sequence>
    </xsd:complexType>
</xsd:element>
<!-- parsedwaveforms ======================= -->
<xsd:annotation>
    <xsd:documentation>
        This is the ECG waveform data which is contained in this file.
        All the data for channel (i.e., "lead") 1 comes first, followed by all the data for channel 2, etc.
        Attributes:
        @dataencoding: how the data is encoded: for example, "Base64".
            Use "Plain" for sample values in ascii: "10 20 35...." .
        @compression: name the type of compression if the data is compressed
            (for example, "XLI" for standard Philips cardiograph compression; if not compressed, omit this attribute) .
        @numberofleads: number of channels or "leads".
        @leadlabels: list of lead labels, with a space as separator, for example, "I II III aVR aVL aVF V1 V2 V3 V4 V5 V6".
        @durationperchannel: duration per channel in milliseconds, for example, 11000 for 11 sec.
        @samplespersecond: samples per second.
        @resolution: amplitude resolution (of least significant bit), in uV (for example, 5).
        @signaloffset: value to be subtracted from each sample point; assume 0 if not present
        @signalsigned: "True" if sample values are signed values
        @bitspersample: the number of bits in each sample, for example, 16 for short integer;
            note that this is NOT the number of bits of the A/D converter, but is the word size of the waveform values.
        @hipass: high pass frequency bandwidth of the waveform, Hz (for example, 0.05).
        @lowpass: low pass frequency bandwidth of the waveform, Hz (for example, 150).
        @notchfiltered: set "True" if the notch filter has been applied to the waveform data.
        @notchfilterfreqs: if notch filtered, this is a list of powerline filter frequencies
            (for example, "60", or main plus harmonics  "60 120 180").
        @artfiltered: set "True" if data has been filtered by the speical Philips "artifact" filter
```

@waveformmodified: set "True" if the waveform has been modified since the original data acquisition.

@modifiedby: the device or system which has modified the wavefrom since original data acquisition.

@up/down sampled: set "True" if the waveform sample rate has been changed since data acquisition.

@up/down samplemethod: describes up/down sample method, for example, "linear interpolation".

@donotfilter: set "True" if data should not be filtered under any circumstances, but should
    be displayed "as is".

@donotanalyze: set "True" if data should not be re-analyzed by a diagnostic algorithm under
    any circumstances.

@otherdescription: for future use if needed.

</xsd:documentation>
</xsd:annotation>
<xsd:element name="parsedwaveforms">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:string">
                <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
                <xsd:attribute name="compression" type="xsd:string" use="optional"/>
                <xsd:attribute name="numberofleads" type="xsd:positiveInteger" use="required"/>
                <xsd:attribute name="leadlabels" type="TYPElistofleadname" use="required"/>
                <xsd:attribute name="durationperchannel" type="TYPEduration" use="required"/>
                <xsd:attribute name="samplespersecond" type="xsd:float" use="required"/>
                <xsd:attribute name="resolution" type="xsd:float" use="required"/>
                <xsd:attribute name="signaloffset" type="xsd:integer" use="optional"/>
                <xsd:attribute name="signalsigned" type="TYPEflag" use="required"/>
                <xsd:attribute name="bitspersample" type="xsd:positiveInteger" use="required"/>
                <xsd:attribute name="hipass" type="xsd:float" use="required"/>
                <xsd:attribute name="lowpass" type="xsd:integer" use="required"/>
                <xsd:attribute name="notchfiltered" type="TYPEflag" use="required"/>
                <xsd:attribute name="notchfilterfreqs" type="xsd:string" use="optional"/>
                <xsd:attribute name="artfiltered" type="TYPEflag" use="optional"/>
                <xsd:attribute name="waveformmodified" type="TYPEflag" use="optional"/>
                <xsd:attribute name="modifiedby" type="xsd:string" use="optional"/>
                <xsd:attribute name="upsampled" type="TYPEflag" use="optional"/>
                <xsd:attribute name="upsamplemethod" type="xsd:string" use="optional"/>
                <xsd:attribute name="downsampled" type="TYPEflag" use="optional"/>
                <xsd:attribute name="downsamplemethod" type="xsd:string" use="optional"/>
                <xsd:attribute name="donotfilter" type="TYPEflag" use="optional"/>
                <xsd:attribute name="donotanalyze" type="TYPEflag" use="optional"/>
                <xsd:attribute name="otherinfo" type="xsd:string" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
```

```
            </xsd:complexType>
    </xsd:element>
    <!--unparsedwaveforms ====================  -->
    <xsd:annotation>
            <xsd:documentation>
                    This is the ECG waveform data which is NOT contained in this file, but is referenced through a link (href).

                    See parsedwaveforms for attribute explanations.
            </xsd:documentation>
    </xsd:annotation>
    <xsd:element name="unparsedwaveforms">
            <xsd:complexType>
                    <xsd:simpleContent>
                            <xsd:extension base="xsd:string">
                                    <xsd:attribute name="href" type="xsd:string" use="required"/>
                                    <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
                                    <xsd:attribute name="compression" type="xsd:string" use="optional"/>
                                    <xsd:attribute name="numberofleads" type="xsd:positiveInteger" use="required"/>
                                    <xsd:attribute name="leadlabels" type="TYPElistofleadname" use="required"/>
                                    <xsd:attribute name="durationperchannel" type="TYPEduration" use="required"/>
                                    <xsd:attribute name="samplespersecond" type="xsd:float" use="required"/>
                                    <xsd:attribute name="resolution" type="xsd:float" use="required"/>
                                    <xsd:attribute name="signaloffset" type="xsd:integer" use="optional"/>
                                    <xsd:attribute name="signalsigned" type="TYPEflag" use="required"/>
                                    <xsd:attribute name="bitspersample" type="xsd:positiveInteger" use="required"/>
                                    <xsd:attribute name="hipass" type="xsd:float" use="required"/>
                                    <xsd:attribute name="lowpass" type="xsd:integer" use="required"/>
                                    <xsd:attribute name="notchfiltered" type="TYPEflag" use="required"/>
                                    <xsd:attribute name="notchfilterfreqs" type="xsd:string" use="optional"/>
                                    <xsd:attribute name="artfiltered" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="waveformmodified" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="modifiedby" type="xsd:string" use="optional"/>
                                    <xsd:attribute name="upsampled" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="upsamplemethod" type="xsd:string" use="optional"/>
                                    <xsd:attribute name="downsampled" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="downsamplemethod" type="xsd:string" use="optional"/>
                                    <xsd:attribute name="donotfilter" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="donotanalyze" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="otherinfo" type="xsd:string" use="optional"/>
                            </xsd:extension>
                    </xsd:simpleContent>
```

```
            </xsd:complexType>
    </xsd:element>
    <!--leadwaveforms ========================  -->
    <xsd:annotation>
            <xsd:documentation>
                    This is ECG waveform data which is contained in this file, but appears as a set of individual lead elements.

                    See parsedwaveforms for attribute explanations.
            </xsd:documentation>
    </xsd:annotation>
    <xsd:element name="leadwaveforms">
            <xsd:complexType>
                    <xsd:sequence>
                            <xsd:element ref="leadwaveform" maxOccurs="unbounded"/>
                    </xsd:sequence>
                    <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
                    <xsd:attribute name="compression" type="xsd:string" use="optional"/>
                    <xsd:attribute name="numberofleads" type="xsd:positiveInteger" use="required"/>
                    <xsd:attribute name="leadlabels" type="TYPElistofleadname" use="required"/>
                    <xsd:attribute name="durationperchannel" type="TYPEduration" use="required"/>
                    <xsd:attribute name="samplespersecond" type="xsd:float" use="required"/>
                    <xsd:attribute name="resolution" type="xsd:float" use="required"/>
                    <xsd:attribute name="signaloffset" type="xsd:integer" use="optional"/>
                    <xsd:attribute name="signalsigned" type="TYPEflag" use="required"/>
                    <xsd:attribute name="bitspersample" type="xsd:positiveInteger" use="required"/>
                    <xsd:attribute name="hipass" type="xsd:float" use="required"/>
                    <xsd:attribute name="lowpass" type="xsd:integer" use="required"/>
                    <xsd:attribute name="notchfiltered" type="TYPEflag" use="required"/>
                    <xsd:attribute name="notchfilterfreqs" type="xsd:string" use="optional"/>
                    <xsd:attribute name="artfiltered" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="waveformmodified" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="modifiedby" type="xsd:string" use="optional"/>
                    <xsd:attribute name="upsampled" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="upsamplemethod" type="xsd:string" use="optional"/>
                    <xsd:attribute name="downsampled" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="downsamplemethod" type="xsd:string" use="optional"/>
                    <xsd:attribute name="donotfilter" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="donotanalyze" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="otherinfo" type="xsd:string" use="optional"/>
            </xsd:complexType>
    </xsd:element>
```

```xml
<xsd:element name="leadwaveform">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:string">
                <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
                <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<!--vector cardiograms - vcgs =======================  -->
<xsd:element name="vcgs">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="vcg" maxOccurs="unbounded"/>
        </xsd:sequence>
        <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="vcg">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:string">
                <xsd:attribute name="vcgname" type="TYPEvcgname" use="required"/>
                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:simpleType name="TYPEvcgname">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="X"/>
        <xsd:enumeration value="Y"/>
        <xsd:enumeration value="Z"/>
    </xsd:restriction>
</xsd:simpleType>
<!--repbeats =======================  -->
```

```xml
<xsd:element name="repbeats">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="repbeat" maxOccurs="unbounded"/>
            <!-- @compression is present if data is compressed, and describes method (for example, "Huffman")
                @resolution is in microvolts
                @repbeatmethod is "mean" for Philips; (another choice is "median" for GE migrated files) -->
        </xsd:sequence>
        <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
        <xsd:attribute name="compression" type="xsd:string" use="optional"/>
        <xsd:attribute name="samplespersec" type="xsd:float" use="required"/>
        <xsd:attribute name="resolution" type="xsd:float" use="required"/>
        <xsd:attribute name="repbeatmethod" type="xsd:string" use="optional"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="repbeat">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="pdur" minOccurs="0">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEduration">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="print">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEduration">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="qonset">
                <xsd:complexType>
                    <xsd:simpleContent>
```

```xsd
                    <xsd:extension base="TYPEfiducial">
                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                        <xsd:attribute name="uneditedvalue" type="TYPEfiducial" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="qrsdur">
        <xsd:complexType>
            <xsd:simpleContent>
                    <xsd:extension base="TYPEduration">
                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                        <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="tonset" minOccurs="0">
        <xsd:complexType>
            <xsd:simpleContent>
                    <xsd:extension base="TYPEfiducial">
                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                        <xsd:attribute name="uneditedvalue" type="TYPEfiducial" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="qtint">
        <xsd:complexType>
            <xsd:simpleContent>
                    <xsd:extension base="TYPEduration">
                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                        <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
    </xsd:element>
    <xsd:element ref="annotations" minOccurs="0"/>
    <xsd:element name="waveform">
        <xsd:complexType>
            <xsd:simpleContent>
```

```xml
                <xsd:extension base="xsd:string">
                        <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
</xsd:sequence>
<xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
        </xsd:complexType>
    </xsd:element>
<!--   end of repbeats ================================= -->
<!-- general purpose waveform annotation elements: -->
<xsd:element name="annotations">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="annotation" minOccurs="0" maxOccurs="unbounded">
                <xsd:complexType>
                    <xsd:sequence>
                        <!-- name of lead this annot. applies to; if global, omit the leadname -->
                        <xsd:element name="leadname" type="TYPEleadname" minOccurs="0"/>
                        <!-- the time of the annotation in millisec: -->
                        <!--    use edited flag and uneditiedvalue only if the annotation was edited -->
                        <xsd:element name="time">
                            <xsd:complexType>
                                <xsd:simpleContent>
                                    <xsd:extension base="xsd:float">
                                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                                        <xsd:attribute name="uneditedvalue" type="xsd:nonNegativeInteger" use="optional"/>
                                    </xsd:extension>
                                </xsd:simpleContent>
                            </xsd:complexType>
                        </xsd:element>
                        <!-- the annotation label: -->
                        <xsd:element name="label" type="xsd:string"/>
                    </xsd:sequence>
                </xsd:complexType>
            </xsd:element>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:simpleType name="TYPEdataencoding">
```

```xml
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="Plain"/>
                        <xsd:enumeration value="Base64"/>
                        <xsd:enumeration value="Hex"/>
                </xsd:restriction>
        </xsd:simpleType>
        <!-- end of waveforms =============================================================-->
        <xsd:simpleType name="TYPErestingecgstatus">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="Not yet determined"/>
                        <xsd:enumeration value="New"/>
                        <xsd:enumeration value="Await review"/>
                        <xsd:enumeration value="Await confirm"/>
                        <xsd:enumeration value="Confirmed"/>
                        <xsd:enumeration value="Unconfirmed"/>
                        <xsd:enumeration value="Archived"/>
                        <xsd:enumeration value="Deleted"/>
                        <xsd:enumeration value="Other"/>
                </xsd:restriction>
        </xsd:simpleType>
        <!-- ========================================================================= -->
        <xsd:element name="listofECGlead">
                <xsd:complexType>
                        <xsd:simpleContent>
                                <xsd:extension base="TYPElistofleadname">
                                        <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
                                </xsd:extension>
                        </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="groupofECGlead">
                <xsd:complexType>
                        <xsd:simpleContent>
                                <xsd:extension base="TYPElistofleadname">
                                        <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
                                </xsd:extension>
                        </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="mdsignatureline" type="xsd:string"/>
        <xsd:element name="pamp" type="TYPEamplitude"/>
```

```
<xsd:element name="pdur" type="TYPEduration"/>
<xsd:element name="parea" type="TYPEarea"/>
<xsd:element name="ppamp" type="TYPEamplitude"/>
<xsd:element name="ppdur" type="TYPEduration"/>
<xsd:element name="ppppdur" type="TYPEduration"/>
<xsd:element name="pparea" type="TYPEarea"/>
<xsd:element name="pppparea" type="TYPEarea"/>
<xsd:element name="qamp" type="TYPEamplitude"/>
<xsd:element name="qdur" type="TYPEduration"/>
<xsd:element name="ramp" type="TYPEamplitude"/>
<xsd:element name="rdur" type="TYPEduration"/>
<xsd:element name="samp" type="TYPEamplitude"/>
<xsd:element name="sdur" type="TYPEduration"/>
<xsd:element name="rpamp" type="TYPEamplitude"/>
<xsd:element name="rpdur" type="TYPEduration"/>
<xsd:element name="spamp" type="TYPEamplitude"/>
<xsd:element name="spdur" type="TYPEduration"/>
<xsd:element name="vat" type="TYPEstarttime"/>
<xsd:element name="qrsppk" type="TYPEpeaktopeak"/>
<xsd:element name="qrsdur" type="TYPEduration"/>
<xsd:element name="qrsarea" type="TYPEarea"/>
<xsd:element name="ston" type="TYPEamplitude"/>
<xsd:element name="stmid" type="TYPEamplitude"/>
<xsd:element name="st80" type="TYPEamplitude"/>
<xsd:element name="stend" type="TYPEamplitude"/>
<xsd:element name="stdur" type="TYPEduration"/>
<xsd:element name="stslope" type="TYPEstslope"/>
<xsd:element name="stshape" type="TYPEstshape"/>
<xsd:element name="tamp" type="TYPEamplitude"/>
<xsd:element name="tdur" type="TYPEduration"/>
<xsd:element name="tarea" type="TYPEarea"/>
<xsd:element name="tpamp" type="TYPEamplitude"/>
<xsd:element name="tptdur" type="TYPEduration"/>
<xsd:element name="tpdur" type="TYPEduration"/>
<xsd:element name="tparea" type="TYPEarea"/>
<xsd:element name="tptparea" type="TYPEarea"/>
<xsd:element name="print" type="TYPEduration"/>
<xsd:element name="prseg" type="TYPEduration"/>
<xsd:element name="qtint" type="TYPEduration"/>
<xsd:element name="pacedetectleads" type="TYPElistofleadname"/>
<xsd:element name="pacepulses">
```

```xml
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element ref="pacepulse" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="pacepulse">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="TYPEnull">
                        <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                        <xsd:attribute name="duration" type="TYPEduration" use="optional"/>
                        <xsd:attribute name="upswingamp" type="xsd:nonNegativeInteger" use="optional"/>
                        <xsd:attribute name="downswingamp" type="xsd:nonNegativeInteger" use="optional"/>
                        <xsd:attribute name="paceamptype" type="TYPEpaceamptype" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="pacemode" type="TYPEintegerORnull"/>
        <xsd:element name="pacemalf" type="TYPEintegerORnull"/>
        <xsd:element name="pacemisc" type="TYPEintegerORnull"/>
        <xsd:element name="ectopicrhythm" type="TYPEintegerORnull"/>
        <xsd:element name="qtintdispersion" type="TYPEduration"/>
        <xsd:element name="numberofcomplexes" type="TYPEcount"/>
        <xsd:element name="numberofgroups" type="TYPEcount"/>
        <xsd:element name="beatclassification" type="TYPElistofgroupnumber"/>
        <xsd:simpleType name="TYPElistofgroupnumber">
            <xsd:list itemType="TYPEgroupnumber"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEgroupnumber">
            <xsd:restriction base="xsd:nonNegativeInteger">
                <xsd:maxInclusive value="50"/>
                <xsd:minInclusive value="0"/>
            </xsd:restriction>
        </xsd:simpleType>
```

```
<xsd:element name="pfrontaxis" type="TYPEaxis"/>
<xsd:element name="phorizaxis" type="TYPEaxis"/>
<xsd:element name="i40frontaxis" type="TYPEaxis"/>
<xsd:element name="i40horizaxis" type="TYPEaxis"/>
<xsd:element name="qrsfrontaxis" type="TYPEaxis"/>
<xsd:element name="qrshorizaxis" type="TYPEaxis"/>
<xsd:element name="t40frontaxis" type="TYPEaxis"/>
<xsd:element name="t40horizaxis" type="TYPEaxis"/>
<xsd:element name="stfrontaxis" type="TYPEaxis"/>
<xsd:element name="sthorizaxis" type="TYPEaxis"/>
<xsd:element name="tfrontaxis" type="TYPEaxis"/>
<xsd:element name="thorizaxis" type="TYPEaxis"/>
<xsd:element name="atrialrate" type="TYPErate"/>
<xsd:element name="heartrate" type="TYPErate"/>
<xsd:element name="lowventrate" type="TYPErate"/>
<xsd:element name="meanventrate" type="TYPErate"/>
<xsd:element name="highventrate" type="TYPErate"/>
<xsd:element name="meanprint" type="TYPEduration"/>
<xsd:element name="meanprseg" type="TYPEduration"/>
<xsd:element name="meanqrsdur" type="TYPEduration"/>
<xsd:element name="meanqtint" type="TYPEduration"/>
<xsd:element name="meanqtc" type="TYPEduration"/>
<xsd:element name="deltawavecount" type="TYPEcount"/>
<xsd:element name="deltawavepercent" type="TYPEpercent"/>
<xsd:element name="bigeminycount" type="TYPEcount"/>
<xsd:element name="bigeminystring" type="TYPEcount"/>
<xsd:element name="trigeminycount" type="TYPEcount"/>
<xsd:element name="trigeminystring" type="TYPEcount"/>
<xsd:element name="wenckcount" type="TYPEcount"/>
<xsd:element name="wenckstring" type="TYPEcount"/>
<xsd:element name="flutterfibcount" type="TYPEcount"/>
<xsd:element name="membercount" type="TYPEcount"/>
<xsd:element name="memberpercent" type="TYPEpercent"/>
<xsd:element name="longestrun" type="TYPEcount"/>
<xsd:element name="ventratestddev" type="TYPErate"/>
<xsd:element name="meanrrint" type="TYPEduration"/>
<xsd:element name="atrialratestddev" type="TYPErate"/>
<xsd:element name="avgpcount" type="TYPEcount"/>
<xsd:element name="notavgpbeats" type="TYPEcount"/>
<xsd:element name="lowprint" type="TYPEduration"/>
<xsd:element name="highprint" type="TYPEduration"/>
```

```xml
<xsd:element name="printstddev" type="TYPEduration"/>
<xsd:element name="meanqtseg" type="TYPEduration"/>
<xsd:element name="comppausecount" type="TYPEcount"/>
<!-- ======================================================================== -->
<!-- Types: -->
<xsd:simpleType name="TYPEnull">
    <xsd:restriction base="xsd:string">
        <xsd:whiteSpace value="collapse"/>
        <xsd:enumeration value=""/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEdate">
    <xsd:union memberTypes="TYPEnull xsd:date"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEtime">
    <xsd:union memberTypes="TYPEnull xsd:time"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEinvalidPlus">
    <xsd:restriction base="xsd:string">
        <xsd:whiteSpace value="collapse"/>
        <xsd:enumeration value=""/>
        <xsd:enumeration value="Indeterminate"/>
        <xsd:enumeration value="Invalid"/>
        <xsd:enumeration value="Failed"/>
        <xsd:enumeration value="Unknown"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEflag">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="True"/>
        <xsd:enumeration value="False"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEnotch">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="None"/>
        <xsd:enumeration value="Positive"/>
        <xsd:enumeration value="Negative"/>
        <xsd:enumeration value="Both positive and negative"/>
        <xsd:enumeration value="Unknown"/>
    </xsd:restriction>
```

```xml
        </xsd:simpleType>
        <xsd:simpleType name="TYPEflagUnk">
            <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Unknown"/>
                <xsd:enumeration value="True"/>
                <xsd:enumeration value="False"/>
            </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEpacestatus">
            <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Paced"/>
                <xsd:enumeration value="Non paced"/>
                <xsd:enumeration value="Paced with magnet"/>
                <xsd:enumeration value="Unknown"/>
            </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEinteger">
            <xsd:union memberTypes="xsd:integer TYPEinvalidPlus"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEintegerORnull">
            <xsd:union memberTypes="TYPEnull xsd:integer"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEamplitude2">
            <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="10000"/>
                <xsd:minInclusive value="-10000"/>
            </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEamplitude">
            <xsd:union memberTypes="TYPEamplitude2 TYPEinvalidPlus"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEpeaktopeak2">
            <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="20000"/>
                <xsd:minInclusive value="0"/>
            </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEpeaktopeak">
            <xsd:union memberTypes="TYPEpeaktopeak2 TYPEinvalidPlus"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEstarttime">
```

```
            <xsd:union memberTypes="xsd:nonNegativeInteger TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEduration">
            <xsd:union memberTypes="xsd:nonNegativeInteger TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEfiducial">
            <xsd:union memberTypes="xsd:nonNegativeInteger TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEarea2">
            <xsd:restriction base="xsd:integer">
                    <xsd:maxInclusive value="20000"/>
                    <xsd:minInclusive value="-20000"/>
            </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEarea">
            <xsd:union memberTypes="TYPEarea2 TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEcount">
            <xsd:union memberTypes="xsd:nonNegativeInteger TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEpercent2">
            <xsd:restriction base="xsd:nonNegativeInteger">
                    <xsd:maxInclusive value="100"/>
                    <xsd:minInclusive value="0"/>
            </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEpercent">
            <xsd:union memberTypes="TYPEpercent2 TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPErate2">
            <xsd:restriction base="xsd:nonNegativeInteger">
                    <xsd:maxInclusive value="1200"/>
                    <xsd:minInclusive value="0"/>
            </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPErate">
            <xsd:union memberTypes="TYPErate2 TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEaxis2">
            <xsd:restriction base="xsd:integer">
                    <xsd:maxInclusive value="360"/>
```

```xml
                <xsd:minInclusive value="-360"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEaxis">
        <xsd:union memberTypes="TYPEaxis2 TYPEinvalidPlus"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEstslope2">
        <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="90"/>
                <xsd:minInclusive value="-90"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEstslope">
        <xsd:union memberTypes="TYPEstslope2 TYPEinvalidPlus"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEbp">
        <xsd:union memberTypes="xsd:float TYPEinvalidPlus"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEheight">
        <xsd:union memberTypes="xsd:float TYPEinvalidPlus"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEweight">
        <xsd:union memberTypes="xsd:float TYPEinvalidPlus"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEstshape">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Straight"/>
                <xsd:enumeration value="Convex"/>
                <xsd:enumeration value="Concave"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEnoiselevel">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="None"/>
                <xsd:enumeration value="Light"/>
                <xsd:enumeration value="Marked"/>
                <xsd:enumeration value="Severe"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEnoise">
```

```
<xsd:restriction base="xsd:string">
        <xsd:enumeration value="Baseline artifacts"/>
        <xsd:enumeration value="AC artifacts"/>
        <xsd:enumeration value="Muscle artifacts"/>
</xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEleadname">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="I"/>
        <xsd:enumeration value="II"/>
        <xsd:enumeration value="III"/>
        <xsd:enumeration value="aVR"/>
        <xsd:enumeration value="-aVR"/>
        <xsd:enumeration value="aVL"/>
        <xsd:enumeration value="aVF"/>
        <xsd:enumeration value="V1"/>
        <xsd:enumeration value="V2"/>
        <xsd:enumeration value="V3"/>
        <xsd:enumeration value="V4"/>
        <xsd:enumeration value="V5"/>
        <xsd:enumeration value="V6"/>
        <xsd:enumeration value="V7"/>
        <xsd:enumeration value="V8"/>
        <xsd:enumeration value="V9"/>
        <xsd:enumeration value="V2R"/>
        <xsd:enumeration value="V3R"/>
        <xsd:enumeration value="V4R"/>
        <xsd:enumeration value="V5R"/>
        <xsd:enumeration value="V6R"/>
        <xsd:enumeration value="V7R"/>
        <xsd:enumeration value="V8R"/>
        <xsd:enumeration value="V9R"/>
        <xsd:enumeration value="C1"/>
        <xsd:enumeration value="C2"/>
        <xsd:enumeration value="C3"/>
        <xsd:enumeration value="C4"/>
        <xsd:enumeration value="C5"/>
        <xsd:enumeration value="C6"/>
        <xsd:enumeration value="C7"/>
        <xsd:enumeration value="C8"/>
        <xsd:enumeration value="C9"/>
```

```
<xsd:enumeration value="C2R"/>
<xsd:enumeration value="C3R"/>
<xsd:enumeration value="C4R"/>
<xsd:enumeration value="C5R"/>
<xsd:enumeration value="C6R"/>
<xsd:enumeration value="C7R"/>
<xsd:enumeration value="C8R"/>
<xsd:enumeration value="C9R"/>
<xsd:enumeration value="CX1"/>
<xsd:enumeration value="CX2"/>
<xsd:enumeration value="CX3"/>
<xsd:enumeration value="CX4"/>
<xsd:enumeration value="Id"/>
<xsd:enumeration value="IId"/>
<xsd:enumeration value="IIId"/>
<xsd:enumeration value="aVRd"/>
<xsd:enumeration value="-aVRd"/>
<xsd:enumeration value="aVLd"/>
<xsd:enumeration value="aVFd"/>
<xsd:enumeration value="V1d"/>
<xsd:enumeration value="V2d"/>
<xsd:enumeration value="V3d"/>
<xsd:enumeration value="V4d"/>
<xsd:enumeration value="V5d"/>
<xsd:enumeration value="V6d"/>
<xsd:enumeration value="V7d"/>
<xsd:enumeration value="V8d"/>
<xsd:enumeration value="V9d"/>
<xsd:enumeration value="V2Rd"/>
<xsd:enumeration value="V3Rd"/>
<xsd:enumeration value="V4Rd"/>
<xsd:enumeration value="V5Rd"/>
<xsd:enumeration value="V6Rd"/>
<xsd:enumeration value="V7Rd"/>
<xsd:enumeration value="V8Rd"/>
<xsd:enumeration value="V9Rd"/>
<xsd:enumeration value="X"/>
<xsd:enumeration value="Y"/>
<xsd:enumeration value="Z"/>
<xsd:enumeration value="Xd"/>
<xsd:enumeration value="Yd"/>
```

```
<xsd:enumeration value="Zd"/>
<xsd:enumeration value="VX1"/>
<xsd:enumeration value="VX2"/>
<xsd:enumeration value="VX3"/>
<xsd:enumeration value="VX4"/>
<xsd:enumeration value="A1"/>
<xsd:enumeration value="A2"/>
<xsd:enumeration value="A3"/>
<xsd:enumeration value="A4"/>
<xsd:enumeration value="USER1"/>
<xsd:enumeration value="USER2"/>
<xsd:enumeration value="USER3"/>
<xsd:enumeration value="CC5"/>
<xsd:enumeration value="CM5"/>
<xsd:enumeration value="CH"/>
<xsd:enumeration value="ML"/>
<xsd:enumeration value="LA"/>
<xsd:enumeration value="RA"/>
<xsd:enumeration value="LL"/>
<xsd:enumeration value="i"/>
<xsd:enumeration value="E"/>
<xsd:enumeration value="C"/>
<xsd:enumeration value="A"/>
<xsd:enumeration value="M"/>
<xsd:enumeration value="F"/>
<xsd:enumeration value="H"/>
<xsd:enumeration value="MaVR"/>
<xsd:enumeration value="MVR"/>
<xsd:enumeration value="S"/>
<xsd:enumeration value="AS"/>
<xsd:enumeration value="ES"/>
<xsd:enumeration value="IS"/>
<xsd:enumeration value="V"/>
<xsd:enumeration value="VM"/>
<xsd:enumeration value="MZ"/>
<xsd:enumeration value="MY"/>
<xsd:enumeration value="NEHB_D"/>
<xsd:enumeration value="NEHB_A"/>
<xsd:enumeration value="NEHB_J"/>
<xsd:enumeration value="BP_X"/>
<xsd:enumeration value="BP_Y"/>
```

```xml
<xsd:enumeration value="BP_Z"/>
<xsd:enumeration value="ECG"/>
<xsd:enumeration value="MCL"/>
<xsd:enumeration value="MCL1"/>
<xsd:enumeration value="PADS"/>
<xsd:enumeration value="PADDLES"/>
<xsd:enumeration value="PACE"/>
<xsd:enumeration value="RESP"/>
<xsd:enumeration value="RESP-Imp"/>
<xsd:enumeration value="RESP-ECG-derived"/>
<xsd:enumeration value="RESP-ECG-derived-I"/>
<xsd:enumeration value="RESP-ECG-derived-II"/>
<xsd:enumeration value="RESP-ECG-derived-III"/>
<xsd:enumeration value="RESP-ECG-derived-aVR"/>
<xsd:enumeration value="RESP-ECG-derived-aVL"/>
<xsd:enumeration value="RESP-ECG-derived-aVF"/>
<xsd:enumeration value="RESP-ECG-derived-V1"/>
<xsd:enumeration value="RESP-ECG-derived-V2"/>
<xsd:enumeration value="RESP-ECG-derived-V3"/>
<xsd:enumeration value="RESP-ECG-derived-V4"/>
<xsd:enumeration value="RESP-ECG-derived-V5"/>
<xsd:enumeration value="RESP-ECG-derived-V6"/>
<xsd:enumeration value="PLETH"/>
<xsd:enumeration value="?"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPElistofleadname">
        <xsd:list itemType="TYPEleadname"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEpaceamptype">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Up swing first"/>
                <xsd:enumeration value="Down swing first"/>
                <xsd:enumeration value="Positive"/>
                <xsd:enumeration value="Negative"/>
                <xsd:enumeration value="Biphasic"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEstringMax32">
        <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
```

```xml
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEstringMax64">
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="64"/>
                </xsd:restriction>
        </xsd:simpleType>
        <!-- All "people" are represented with one of these two types;
                the element hold the person's name if known, else the null string ""
                @the id attribute holds the person's ID (for example, logname or UPIN): -->
        <xsd:complexType name="TYPEperson">
                <xsd:simpleContent>
                        <xsd:extension base="TYPEstringMax32">
                                <xsd:attribute name="id" type="TYPEstringMax64" use="optional"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
        <!-- Person with additional date and time attribute, representing
          time that an action was performed (for example, edit or confirmation);
                the element hold the person's name if known, else the null string ""
                @date of the last "action"
                @time of the last "action"
                @the id attribute holds the person's ID (for example, logname or UPIN) -->
        <xsd:complexType name="TYPEpersonwithdatetime">
                <xsd:simpleContent>
                        <xsd:extension base="TYPEstringMax32">
                                <xsd:attribute name="date" type="TYPEdate" use="optional"/>
                                <xsd:attribute name="time" type="TYPEtime" use="optional"/>
                                <xsd:attribute name="id" type="TYPEstringMax64" use="optional"/>
                        </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:schema>
```

XML SCHEMA 1.04.01

<?xml version="1.0" encoding="UTF-8"?>

<!--Conforms to w3c http://www.w3.org/2001/XMLSchema-->

<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns="http://www3.medical.philips.com" targetNamespace="http://www3.medical.philips.com" elementFormDefault="qualified">

  <xsd:annotation>

    <xsd:documentation xml:lang="en">

    Note: all amplitudes are in microvolts (uV);

        all intervals, durations, and fiducial times are in milliseconds;

        filter frequency cutoff values are in Hertz (Hz).

    Revision history:

    - all rev 1.04 and 1.04.01modifications described in "Philips_ECG_ Schema_1.04.01_Changes_March_19_2008.xls"

    rev. 1.04.01 March 19, 2008

     - Added "PageWriter TC" to device list "TYPEmachine"

     - Added "analysiserror" and "analysiserrormessage" to "..\internalmeasurements\crossleadmeasurements"

     - Changed "documentversion" to "1.04.01"

    rev. 1.04 Sept. 6, 2005

     - made pacepulse element "TYPEnull" so that whitespace in the pacepulse element will not prevent schema validation. (TMVue exports whitespace in this element).

    rev. 1.04 June 27, 2005

     - deleted TYPEInvalid and changed TYPEfiducial to TYPEInvalidPlus

    rev. 1.04 June 10, 2005

     - re-inserted all Cx labels for backwards compatibility

    rev. 1.04 June 9, 2005

     - added patient@customcriteriaversion and patient@othercriteriaversion

     - added additional lead labels and deleted all Cx labels

     - made a few more elements optional

     - added dataacquisition/modality

     - added generalpatientdata/secondaryid

     - added "Migration" to statementsource

     - added optional globalmeasurements/atrialrate

rev. 1.04 April 27, 2005
    - comments updated

rev. 1.04 March 28, 2005 (d)
    - all "people" (except patient) are now one element holding their "name"; with a 64 char max @id attribute
  - added editor (to documentinfo) with @id @date @time;
  - added confirmingclinician (to interpretation) with @id @date @time;
  - added internalmeasurements/configsettings
  -simplified "namedmeasurement"
  - added union with null to pacemode, pacemisc, pacemalf, ectopicrhythm
  - added xsd:whiteSpace value="collapse"   to elements which allow "" (null) values.
  - this allows: both <pacemode/> and
           <pacemode>
           </pacemode> (which includes a CR/LF/Tab) to pass schema validation

rev. 1.04 March 11, 2005
  - in parsedwaveforms, unparsedwaveforms, and leadwaveforms:
    a)renamed "hipassbandwidth" to "hipass" to be consistent with dataacquisition
    b)renamed "lowpassbandwidth" to "lowpass" to be consistent with dataacquisition
    Note: "hipass" and "lowpass" were specified in:
      "Philips_ECG_ Schema_1.04_Changes_March_4_2005.xls"
   c) added signaloffset (integer) and signalsigned (flag) since these could also
     be modified by a system after signal acquisition
   d) made resolution, hipass, lowpass, notchfiltered and signalsigned "required" attributes
   e) renamed "nbitspersample" to "bitspersample" to be consistent with dataacquisition
   f) made samplespersecond type "float" to match dataacquisition
   g) re-ordered sequence of attributes to be more logical
- changed "signaloffset" in dataacquisition from type "string" to "integer"
- repbeat@samplespersecond has also been changed to type "float".

rev. 1.04 March 4, 2005
  - renamed ../userdefine@number to ../userdefine/@index.
  - deleted legacy crossleadmeasurements/pon qrson qrsoff ton toff; rep beat measurements should be used.
  - deleted "default=0" for pacemode, pacemalf,pacemisc,ectopicrhythm
  - deleted all "default=False" for flag attributes, and explicitly made those attributes optional: if not present, assume "False"

rev. 1.04 March 3, 2005
  - added optional "filename" element to documentinfo section

rev. 1.04 March 2, 2005

-TYPEacquisitiontype: "STD-12" changed to "10-WIRE" for consistency

- patient @criteriaversionforpatientdata attribute added back in

rev. 1.04   March 1, 2005

 - major modifications; described in "Philips_ECG_ Schema_1.04_Changes_March_1_2005.xls"

rev. 1.03 Sep. 22nd. 2003

 - add tag compareinfostatement under

  /restingecgdata/interpretations/interpretation/serialcomparison/previousecg/

 July 29th. 2003

 - allow float values for amplitude gain and time gain

  eg. allow 2.5mm/mv setting for amplitude gain

 July 21st. 2003

 - add valid lead names: X, Y, and Z

 - allow no groupmeasurement(usually when Renaissance given defective data)

 - add new type TYPEinteger to allow vector meas. to have invalid values(blank, Failed etc...)

  this is the case if Renaissance encounter bad data

 - add optional reviewingclinician element under acquirer

 - add optional @printtruncationflag in reportformat to indicate

  printing of truncated fields is requested

 - change the ncolumn max from 5 to 12 to accomodate 1x12(PAN12) report

 - add optional @machineid to the machine element(=Sierra/Viper deviceid)

 - make @crc optional; if not there, don't enforce crc checking

 - add drgcategory the same level as symptom, history etc...

 - add optional global meas. qrs transversed vector

 - add optional defaultage attribute to the age element

 - add optional acsetting element under signalcharacteristics

 - change STATflag attribute in orderinfo to priority

 - correct an error in the userdefine minimum req.(from 1 to 0)

 - add drgcategories element as parent of drgcategory element

 - add code attribute to the drgcategory element

 - make the id attribute of race, symptom, history, medication and diagnosis

  required

 - make the code attribute of race, symptom, history, medication and diagnosis

  optional

 - add attribute timesequence to waveformformat element

  the possible value for timesequence is Continous or Simultaneous

 - make previousecg element optional

 - add date and time attribute to the previousecg element

 - add crc attribute to root element restingecgdata

  will compute crc from documentinfo to the end of the file

- add new values to TYPEstatementsource
- change previousecgs to previousecg
- add status attribute to previousecg element
- add element severity to previousecg element
- add subtype attribute to codedstatement
- add subtype attribute to qualitystatement
- add new type TYPEstatementsubtype
- rename compareinfostatement to mdsignatureline
- delete elements under interpretationdatastructure except statementcomponents
- add/modify machine element possible values
- add attribute detaildescription for machine element; will be used to store
  machine information such as software rev. etc...
  the current convention is :
      MFG:MODEL:SW_REV(: separated values)

rev. 1.02   Nov. 25th. 2002
- add Unknown value to gender element
- allow multiple words for race element
- add pacestatus element to indicate the patient pace state
- modify serial comparison tags per recommendation from Leigh Wells
- for age only allows 1 type of entry: dob or years or months or weeks etc...
- add fiducial attributes for the rep beat waveforms
- add more possible values to the pace status, pace misc. and pace modes
- add optional extended measurement flag in the report info
- add optional unique database id for Viper database
- add optional filterflag to the parsedwaveform
- add optional lead names with active pace detections
- add optional pace amplitude value attributes

rev. 1.01   June 10th. 2002
- add new element compareinfostatement
- add new attrib criteriaversionforpatientdata
- patientid element cannot be null; has to contain between 1 and 40 chars inclusive
- add optional id attrib to race, severity, ecg_severity, symptom, history,
  diagnosis and medication
- simplify the elements in interpretationdatastructure; also add code and id attrib
  to the elements
- add new enum values to TYPEcriteriaversion: V8, None and Unknown
- remove 1 enum value from TYPEcriteriaversion: P1

rev. 1.00   May 23rd. 2002

- Draft to Release status

```
</xsd:documentation>
</xsd:annotation>
<!-- -->
<!--Conforms to w3c http://www.w3.org/2001/XMLSchema-->
<!-- -->
<!-- include the extended type file for custom types -->
<xsd:include schemaLocation="PhilipsECGExtendedType.xsd"/>
<!-- -->
<!-- ========================================================================= -->
<!--   This is the highest level document description: -->
<xsd:element name="restingecgdata">
      <xsd:complexType>
          <xsd:sequence>
                  <!-- document/file information: -->
                  <xsd:element ref="documentinfo"/>
                  <!-- these are user-configurable fields from the cardiograph: -->
                  <xsd:element ref="userdefines" minOccurs="0"/>
                  <!-- ECG "order" information: -->
                  <xsd:element ref="orderinfo" minOccurs="0"/>
                  <!-- this section contains links to previous and/or subsequent ECGs: -->
                  <xsd:element ref="otherECGs" minOccurs="0"/>
                  <!-- description of the report format used to display the visual ECG report: -->
                  <xsd:element ref="reportinfo"/>
                  <!-- description of the data acquisition settings, as well as the acquirer, eg., hospital, location, physician, etc.: -->
                  <xsd:element ref="dataacquisition"/>
                  <!-- patient information: -->
                  <xsd:element ref="patient"/>
                  <!-- these "internal" measurements are measurements and variables generated by the automated
diagnostic algorithm; global meaurements in the "interpretation" section supercede these values:  -->
                  <xsd:element ref="internalmeasurements" minOccurs="0"/>
                  <!-- this section contains diagnostic interpretations made by the diagnostic algorithm and/or
interpretations added or editted by a reviewing cardiologist;  in addition, this section contains
the final "global" measurements, which also may have been manually editted; these measurements
will always take precedence over those in the "internalmeasurements" section: -->
                  <xsd:element ref="interpretations" minOccurs="0"/>
                  <!-- ECG waveform sample values;  the settings in the "dataacquisition" section describe the waveform
   data, unless the data has subsequently been modified (e.g., filtered, resampled) by a subsequent device,
   in which case a flag is set, and the settings in this section will then describe the waveform data: -->
```

```xml
                    <xsd:element ref="waveforms" minOccurs="0"/>
                </xsd:sequence>
                <xsd:attribute name="crc" type="xsd:string" use="optional"/>
                <xsd:attribute name="status" type="TYPErestingecgstatus" use="required"/>
                <xsd:attribute name="lang" type="xsd:language" use="required"/>
                <xsd:attribute name="locale" type="xsd:language" use="optional"/>
                <!-- @crc: the cyclic-redundancy-check value, if available. -->
        </xsd:complexType>
    </xsd:element>
    <!-- ======================================================================== -->
    <xsd:element name="documentinfo">
        <xsd:complexType>
            <xsd:sequence>
                <!-- this is usually the name of the file, that is not a requirement; this field should always be a
        36 character GUID (globally unique identifier), followed by ".xml": -->
                <xsd:element ref="documentname"/>
                <!-- optional filename (if different from the documentname; no length restrictions): -->
                <xsd:element name="filename" type="xsd:string" minOccurs="0"/>
                <!-- name of the schema: -->
                <xsd:element ref="documenttype"/>
                <!-- schema version: -->
                <xsd:element ref="documentversion"/>
                <!-- name with @id of the most recent ECG editor (with @date and @time of last edit) -->
                <xsd:element name="editor" type="TYPEpersonwithdatetime" minOccurs="0"/>
                <!-- optional comments added to describe the ECG -->
                <xsd:element name="comments" type="xsd:string" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <!-- should be "GUID.xml" with a 36 character GUID -->
    <xsd:element name="documentname">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:length value="40"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="documenttype">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:enumeration value="PhilipsECG"/>
```

```xml
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="documentversion">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:enumeration value="1.04.01"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <!-- ============================================================================ -->
    <!-- user defined fields: -->
    <xsd:element name="userdefines">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="userdefine" minOccurs="0" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="userdefine">
        <xsd:complexType>
            <xsd:sequence>
                <!-- user configured label: -->
                <xsd:element ref="label"/>
                <!-- the user entered value of the field: -->
                <xsd:element ref="value"/>
            </xsd:sequence>
            <xsd:attribute name="index" type="xsd:positiveInteger" use="required"/>
            <!-- @number: the ID of the userdefine, i.e., 1,2,3, ...,:  -->
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="label">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="value">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
```

```xml
                    <xsd:maxLength value="32"/>
                </xsd:restriction>
            </xsd:simpleType>
    </xsd:element>
    <!-- ========================================================================= -->
    <xsd:element name="orderinfo">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="ordernumber"/>
                <xsd:element ref="uniqueorderid"/>
                <xsd:element name="orderbillingcode" type="xsd:string" minOccurs="0"/>
                <xsd:element name="orderremarks" type="xsd:string" minOccurs="0"/>
                <xsd:element ref="reasonfororder" minOccurs="0"/>
                <xsd:element ref="drgcategories" minOccurs="0"/>
                <xsd:element ref="orderstatus" minOccurs="0"/>
                <!-- this is the logical dept association: -->
                <xsd:element ref="inbox" minOccurs="0"/>
                <!-- optional elements for future use: -->
                <xsd:element name="other" minOccurs="0" maxOccurs="unbounded">
                    <xsd:complexType>
                        <xsd:simpleContent>
                            <xsd:extension base="xsd:string">
                                <xsd:attribute name="label" type="xsd:string" use="required"/>
                            </xsd:extension>
                        </xsd:simpleContent>
                    </xsd:complexType>
                </xsd:element>
            </xsd:sequence>
            <xsd:attribute name="priority" type="xsd:string" use="required"/>
            <xsd:attribute name="orderrequestdate" type="xsd:date" use="optional"/>
            <xsd:attribute name="orderrequesttime" type="xsd:time" use="optional"/>
            <xsd:attribute name="dateprocessed" type="xsd:date" use="optional"/>
            <xsd:attribute name="timeprocessed" type="xsd:time" use="optional"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="ordernumber">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
```

```
        </xsd:element>
        <xsd:element name="uniqueorderid">
                <xsd:simpleType>
                        <xsd:restriction base="xsd:string">
                                <xsd:maxLength value="32"/>
                        </xsd:restriction>
                </xsd:simpleType>
        </xsd:element>
        <xsd:element name="reasonfororder">
                <xsd:simpleType>
                        <xsd:restriction base="xsd:string">
                                <xsd:maxLength value="32"/>
                        </xsd:restriction>
                </xsd:simpleType>
        </xsd:element>
        <xsd:element name="drgcategories">
                <xsd:complexType>
                        <xsd:sequence>
                                <xsd:element ref="drgcategory" minOccurs="0" maxOccurs="4"/>
                        </xsd:sequence>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="drgcategory">
                <xsd:complexType>
                        <xsd:simpleContent>
                                <xsd:extension base="xsd:string">
                                        <xsd:attribute name="id" type="xsd:string" use="required"/>
                                        <xsd:attribute name="code" type="xsd:string" use="optional"/>
                                </xsd:extension>
                        </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="orderstatus">
                <xsd:simpleType>
                        <xsd:restriction base="xsd:string">
                                <xsd:maxLength value="32"/>
                        </xsd:restriction>
                </xsd:simpleType>
        </xsd:element>
        <xsd:element name="inbox">
                <xsd:simpleType>
```

```xml
                    <xsd:restriction base="xsd:string">
                            <xsd:maxLength value="32"/>
                    </xsd:restriction>
            </xsd:simpleType>
    </xsd:element>
    <!-- ========================================================================= -->
    <!-- links to previous or subsequent ECGs: -->
    <xsd:element name="otherECGs">
            <xsd:complexType>
                    <xsd:sequence>
                            <xsd:element name="otherECG" minOccurs="0" maxOccurs="unbounded">
                                    <xsd:complexType>
                                            <xsd:sequence>
                                                    <!-- type is either "previous" or "subsequent" -->
                                                    <xsd:element name="type" type="TYPEotherECGtype"/>
                                                    <xsd:element name="documentname" type="xsd:string"/>
                                                    <xsd:element ref="severity" minOccurs="0"/>
                                                    <xsd:element name="mdsignatureline" type="xsd:string" minOccurs="0"/>
                                                    <!-- optional other information (future use): -->
                                                    <!-- other info has both a "label" (attribute) and a "value" (node): -->
                                                    <xsd:element name="other" minOccurs="0" maxOccurs="unbounded">
                                                            <xsd:complexType>
                                                                    <xsd:simpleContent>
                                                                            <xsd:extension base="xsd:string">
                                                                                    <xsd:attribute name="label" type="xsd:string" use="required"/>
                                                                            </xsd:extension>
                                                                    </xsd:simpleContent>
                                                            </xsd:complexType>
                                                    </xsd:element>
                                            </xsd:sequence>
                                            <xsd:attribute name="date" type="xsd:date" use="required"/>
                                            <xsd:attribute name="time" type="xsd:time" use="required"/>
                                            <xsd:attribute name="status" type="TYPErestingecgstatus" use="optional"/>
                                    </xsd:complexType>
                            </xsd:element>
                    </xsd:sequence>
            </xsd:complexType>
    </xsd:element>
    <xsd:simpleType name="TYPEotherECGtype">
            <xsd:restriction base="xsd:string">
                    <xsd:enumeration value="previous"/>
```

```xml
                    <xsd:enumeration value="subsequent"/>
            </xsd:restriction>
    </xsd:simpleType>
    <!-- ======================================================================= -->
    <xsd:element name="reportinfo">
        <xsd:complexType>
            <xsd:sequence>
                <!-- reportlabel provides important information to the reviewing clinician, and should be printed on the report;
                            (or at least if it is not a standard 12 lead.....)
                            it combines electrode placement information with report format information: -->
                <xsd:element ref="reportlabel"/>
                <!-- a more detailed description of the report:
             (if "reportlabel" is "Other", then this description should be used): -->
                <xsd:element ref="reportdescription"/>
                <!-- format characteristics: -->
                <xsd:element ref="reportformat"/>
                <!-- waveform gain settings to be used for the report: -->
                <xsd:element ref="reportgain"/>
                <!-- bandwidth settings to be used for the report: -->
                <xsd:element ref="reportbandwidth"/>
                <!-- this is a complete copy of all the settings for a report;
            to be used to save either the original report settings if they are subsequently modified,
             or modified report settings, or report settings for an individual user -->
                <xsd:element ref="savedreportinfo" minOccurs="0" maxOccurs="unbounded"/>
             </xsd:sequence>
             <xsd:attribute name="date" type="xsd:date" use="required"/>
             <xsd:attribute name="time" type="xsd:time" use="required"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="reportlabel" type="TYPEreportlabel"/>
    <!-- Use "STD 12 LEAD" for most reports;
      Use "STD 12 LEAD; REP BEAT" for PAN-12 report -->
    <xsd:simpleType name="TYPEreportlabel">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="STD 12 LEAD"/>
                <xsd:enumeration value="STD 12+ LEAD"/>
                <xsd:enumeration value="MASON-LIKAR 12 LEAD"/>
                <xsd:enumeration value="MASON-LIKAR 12+ LEAD"/>
                <xsd:enumeration value="MOD LEAD PLACEMENT"/>
                <xsd:enumeration value="STD PLACEMENT; SOME LEADS DERIVED"/>
                <xsd:enumeration value="MASON-LIKAR; SOME LEADS DERIVED"/>
```

```xml
                        <xsd:enumeration value="MOD LEAD PLACEMENT; SOME LEADS DERIVED"/>
                        <xsd:enumeration value="EASI DERIVED LEADS"/>
                        <xsd:enumeration value="EASI (OFF STERNUM) DERIVED LEADS"/>
                        <xsd:enumeration value="STD 12 LEAD; REP BEAT"/>
                        <xsd:enumeration value="STD 12+ LEAD; REP BEAT"/>
                        <xsd:enumeration value="MASON-LIKAR 12 LEAD; REP BEAT"/>
                        <xsd:enumeration value="MASON-LIKAR 12+ LEAD; REP BEAT"/>
                        <xsd:enumeration value="MOD LEAD PLACEMENT; REP BEAT"/>
                        <xsd:enumeration value="EASI DERIVED LEADS; REP BEAT"/>
                        <xsd:enumeration value="EASI (OFF STERNUM) DERIVED LEADS; REP BEAT"/>
                        <xsd:enumeration value="MIDA"/>
                        <xsd:enumeration value="NEHB"/>
                        <xsd:enumeration value="Other"/>
            </xsd:restriction>
    </xsd:simpleType>
<xsd:annotation>
        <xsd:documentation>
    Example reportdescriptions:
     "Standard 12 Lead Report"
     "Standard 12+ Lead Report"
     "Standard 15 Lead Report"
        "12 Lead Report with Mason Likar Lead Placement"
        "12 Lead Report with Alternate Lead Placement"
     "Standard 12 Lead Report; Some Leads Derived"
        "MIDA Derived 12 Lead Report"
        "EASI Derived 12 Lead Report"
     "Standard 12 Lead Report; Representative Beat Display"
    </xsd:documentation>
</xsd:annotation>
<xsd:element name="reportdescription" type="xsd:string"/>
<xsd:element name="reportformat">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="interpretationformat"/>
                <xsd:element ref="waveformformat"/>
                <!-- @extendedmeasflag is set "True" if the report format contains extra pages with lead-by-lead
                 measurements, etc (i.e., the "measurement matrix") -->
            </xsd:sequence>
            <xsd:attribute name="extendedmeasflag" type="TYPEflag" use="optional"/>
            <xsd:attribute name="printtruncationflag" type="TYPEflag" use="optional"/>
        </xsd:complexType>
```

```
</xsd:element>
<xsd:element name="interpretationformat" type="TYPEinterpretationformat"/>
<xsd:element name="waveformformat">
    <xsd:complexType>
        <xsd:sequence>
            <!-- rows and columns of the main waveform section: -->
            <xsd:element ref="mainwaveformformat"/>
            <!-- number of leads in the rhythm waveform section: -->
            <xsd:element ref="rhythmwaveformformat"/>
        </xsd:sequence>
        <xsd:attribute name="leadsequence" type="TYPEleadsequence" use="required"/>
        <xsd:attribute name="timesequence" type="TYPEtimesequence" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="mainwaveformformat">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPElistofleadname">
                <xsd:attribute name="nrow" type="xsd:positiveInteger" use="required"/>
                <xsd:attribute name="ncolumn" type="xsd:positiveInteger" use="required"/>
                <xsd:attribute name="repbeat" type="TYPEflag" use="optional"/>
            </xsd:extension>
            <!-- "repbeat" attribute "True" signifies display of the representative beat waveform for each lead -->
            <!-- (note that for repbeat display, "timesequence" should be set to "Simultaneous") -->
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="rhythmwaveformformat">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPElistofleadname">
                <xsd:attribute name="nrhythm" type="xsd:nonNegativeInteger" use="required"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:simpleType name="TYPEleadsequence">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="Standard"/>
        <xsd:enumeration value="Cabrera"/>
    </xsd:restriction>
```

```
</xsd:simpleType>
<!-- Continuous means that time increases "continuously" across the ncolumn's of the main waveform section;
  Simultaneous means that all the columns of the main waveform section occur at the same time -->
<xsd:simpleType name="TYPEtimesequence">
      <xsd:restriction base="xsd:string">
            <xsd:enumeration value="Continuous"/>
            <xsd:enumeration value="Simultaneous"/>
      </xsd:restriction>
</xsd:simpleType>
<xsd:element name="reportgain">
      <xsd:complexType>
            <xsd:sequence>
                  <xsd:element ref="amplitudegain"/>
                  <xsd:element ref="timegain"/>
            </xsd:sequence>
      </xsd:complexType>
</xsd:element>
<xsd:element name="amplitudegain">
      <xsd:complexType>
            <xsd:sequence>
                  <xsd:element ref="overallgain"/>
                  <xsd:element ref="groupgain" minOccurs="0"/>
                  <xsd:element ref="individualleadgain" minOccurs="0"/>
            </xsd:sequence>
            <xsd:attribute name="unit" use="required">
                  <xsd:simpleType>
                        <xsd:restriction base="xsd:string">
                              <xsd:enumeration value="mm/mv"/>
                        </xsd:restriction>
                  </xsd:simpleType>
            </xsd:attribute>
      </xsd:complexType>
</xsd:element>
<xsd:element name="overallgain" type="xsd:float"/>
<xsd:element name="groupgain">
      <xsd:complexType>
            <xsd:simpleContent>
                  <xsd:extension base="xsd:float">
                        <xsd:attribute name="leadgroupname" use="required">
                              <xsd:simpleType>
                                    <xsd:list itemType="TYPEleadname"/>
```

```xml
                    </xsd:simpleType>
                </xsd:attribute>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="individualleadgain">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:float">
                <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="timegain">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:float">
                <xsd:attribute name="unit" use="required">
                    <xsd:simpleType>
                        <xsd:restriction base="xsd:string">
                            <xsd:enumeration value="mm/s"/>
                        </xsd:restriction>
                    </xsd:simpleType>
                </xsd:attribute>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="reportbandwidth">
    <xsd:complexType>
        <xsd:sequence>
            <!-- desired high pass frequency cutoff of the displayed waveform data: -->
            <xsd:element ref="highpassfiltersetting"/>
            <!-- desired low pass frequency cutoff of the displayed waveform data: -->
            <xsd:element ref="lowpassfiltersetting"/>
            <!-- the "notch filter" refers to the A/C powerline electromagnetic interference removal filter -->
            <xsd:element ref="notchfiltersetting"/>
            <!-- much of the powerline interference appears at the 3rd harmonic of the powerline frequency... -->
            <xsd:element ref="notchharmonicssetting" minOccurs="0"/>
```

```xml
<!-- set "True" if the special "artifact" filter should be run on the data before displaying it: -->
<xsd:element ref="artifactfilterflag" minOccurs="0"/>
<!-- set "True" if a hysteresis filter should be run on the data before displaying it: -->
<xsd:element ref="hysteresisfilterflag" minOccurs="0"/>
</xsd:sequence>
</xsd:complexType>
</xsd:element>
<xsd:element name="highpassfiltersetting" type="xsd:float"/>
<xsd:element name="lowpassfiltersetting" type="xsd:positiveInteger"/>
<xsd:element name="notchfiltersetting" type="TYPEacfiltersetting"/>
<xsd:element name="notchharmonicssetting" type="TYPEacharmonicssetting"/>
<xsd:element name="artifactfilterflag" type="TYPEflag"/>
<xsd:element name="hysteresisfilterflag" type="TYPEflag"/>
<!-- multiple copies of the report info can be saved using this element:
    "original" should be set True if this describes the original report settings at time of dataacquisition.
    "userid" could be used to specify the settings desired by a particular user. -->
<xsd:element name="savedreportinfo">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="reportlabel"/>
            <xsd:element ref="reportdescription"/>
            <xsd:element ref="reportformat"/>
            <xsd:element ref="reportgain"/>
            <xsd:element ref="reportbandwidth"/>
            <xsd:element name="other" minOccurs="0" maxOccurs="unbounded">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="xsd:string">
                            <xsd:attribute name="label" type="xsd:string" use="required"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
        </xsd:sequence>
        <xsd:attribute name="date" type="xsd:date" use="required"/>
        <xsd:attribute name="time" type="xsd:time" use="required"/>
        <xsd:attribute name="original" type="TYPEflag" use="optional"/>
        <xsd:attribute name="userid" type="xsd:string" use="optional"/>
        <xsd:attribute name="other" type="xsd:string" use="optional"/>
    </xsd:complexType>
</xsd:element>
```

```xml
<xsd:simpleType name="TYPEinterpretationformat">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="None"/>
        <xsd:enumeration value="Severity only"/>
        <xsd:enumeration value="Short measurements"/>
        <xsd:enumeration value="Extended measurements"/>
        <xsd:enumeration value="Interpretations"/>
        <xsd:enumeration value="Interpretations and reasons"/>
        <xsd:enumeration value="Other"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEacfiltersetting">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="None"/>
        <xsd:enumeration value="50"/>
        <xsd:enumeration value="60"/>
        <xsd:enumeration value="50 60"/>
        <xsd:enumeration value="Other"/>
        <xsd:enumeration value="Unknown"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEacharmonicssetting">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="None"/>
        <xsd:enumeration value="100"/>
        <xsd:enumeration value="150"/>
        <xsd:enumeration value="100 150"/>
        <xsd:enumeration value="120"/>
        <xsd:enumeration value="180"/>
        <xsd:enumeration value="120 180"/>
        <xsd:enumeration value="Other"/>
        <xsd:enumeration value="Unknown"/>
    </xsd:restriction>
</xsd:simpleType>
<!-- end of reportinfo -->
<!-- ========================================================================= -->
<xsd:element name="dataacquisition">
    <xsd:complexType>
        <xsd:sequence>
            <!-- the ECG Management System database id, if different: -->
            <xsd:element name="databaseid" type="xsd:string" minOccurs="0"/>
```

```xml
<!-- the modality of the ECG acquisition: eg., RESTING, EXERCISE: -->
<xsd:element name="modality" type="xsd:string" minOccurs="0"/>
<!-- this describes the data acquisition device: -->
<xsd:element ref="machine"/>
<!-- this describes the people & place of acquisition: -->
<xsd:element ref="acquirer"/>
<!-- this describes the signal characteristics at time of data acquisition. -->
<!-- note that this does NOT describe the waveform in this file, -->
<!--   since it may have been subsequently modified: -->
<xsd:element ref="signalcharacteristics"/>
        </xsd:sequence>
        <xsd:attribute name="date" type="xsd:date" use="required"/>
        <xsd:attribute name="time" type="xsd:time" use="required"/>
        <xsd:attribute name="statflag" type="TYPEflag" use="optional"/>
        <!-- date & time of ECG acquisition: -->
        <!-- if this is a "Stat" ECG, set to "True": -->
    </xsd:complexType>
</xsd:element>
<xsd:element name="machine">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPEmachine">
                <xsd:attribute name="machineid" type="xsd:string" use="optional"/>
                <xsd:attribute name="detaildescription" type="xsd:string" use="required"/>
            </xsd:extension>
            <!-- this is the serial number or other ID of this particular device: -->
            <!-- this should contain model number and software version: -->
            <!-- eg., "Philips Medical Products:M5000:X.01.00.35" -->
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="acquirer">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="encounterid" minOccurs="0"/>
            <xsd:element name="operator" type="TYPEperson" minOccurs="0"/>
            <xsd:element ref="room" minOccurs="0"/>
            <xsd:element ref="bed" minOccurs="0"/>
            <xsd:element ref="departmentid" minOccurs="0"/>
            <xsd:element ref="departmentname" minOccurs="0"/>
            <xsd:element ref="institutionid" minOccurs="0"/>
```

```xml
                    <xsd:element ref="institutionname" minOccurs="0"/>
                    <xsd:element ref="facilityid" minOccurs="0"/>
                    <xsd:element ref="facilityname" minOccurs="0"/>
                    <xsd:element name="orderingclinician" type="TYPEperson" minOccurs="0"/>
                    <xsd:element name="fellow" type="TYPEperson" minOccurs="0"/>
                    <xsd:element name="attendingclinician" type="TYPEperson" minOccurs="0"/>
                    <xsd:element name="referringclinician" type="TYPEperson" minOccurs="0"/>
                    <xsd:element name="consultingclinician" type="TYPEperson" minOccurs="0"/>
            </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="encounterid">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="40"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="signalcharacteristics">
        <xsd:complexType>
                <xsd:sequence>
                        <!-- sample rate of the digitized signal; samples-per-second: -->
                        <xsd:element ref="samplingrate"/>
                        <!-- resolution of least-significant-bit, in micro-volts: -->
                        <xsd:element ref="resolution"/>
                        <!-- this is the high-pass filter frequency cutoff, e.g., 0.05 or 0.5Hz, etc: -->
                        <xsd:element ref="hipass"/>
                        <!-- this is the low-pass filter frequency cutoff, e.g., 150, or 100Hz, etc: -->
                        <xsd:element ref="lowpass"/>
                        <!-- this is the power-line frequency of the data acquisition device, if known: -->
                        <xsd:element ref="acsetting" minOccurs="0"/>
                        <!-- set "True" if data has been power-line notch filtered: -->
                        <xsd:element name="notchfiltered" type="TYPEflag" minOccurs="0"/>
                        <!-- a list of notch filter frequencies: eg, "60"  or "60 120 180" -->
                        <xsd:element name="notchfilterfreqs" type="xsd:string" minOccurs="0"/>
                        <!-- set "True" if data has been filtered by the special artifact filter: -->
                        <xsd:element name="artfiltered" type="TYPEflag" minOccurs="0"/>
                        <!-- this describes the acquisition in terms of number of wires/font-end type on the patient: -->
                        <xsd:element ref="acquisitiontype"/>
                        <!-- description if acquisitiontype is "Other": -->
                        <xsd:element name="otheracquisitioninfo" type="xsd:string" minOccurs="0"/>
```

```
                    <!-- bits per sample of the A/D converter: -->
                    <xsd:element ref="bitspersample"/>
                    <!-- value of any offset wich must be subtracted form the data: -->
                    <xsd:element ref="signaloffset"/>
                    <!-- "True" is the data is signed: -->
                    <xsd:element ref="signalsigned"/>
                    <!-- number of channels acquired: -->
                    <xsd:element ref="numberchannelsallocated"/>
                    <!-- number of channels valid, if known: -->
                    <xsd:element ref="numberchannelsvalid"/>
                    <!-- description of the electrode placement, if known (eg., Mason-Likar): -->
                    <xsd:element ref="electrodeplacement"/>
                    <!-- description if electrodeplacement is "Other": -->
                    <xsd:element name="otherplacementinfo" type="xsd:string" minOccurs="0"/>
                    <!-- list of derived leads, if any (eg., "V1 V3 V5 V6"): -->
                    <xsd:element ref="derivedleads" minOccurs="0"/>
            </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="samplingrate" type="xsd:float"/>
<xsd:element name="resolution" type="xsd:float"/>
<xsd:element name="hipass" type="xsd:float"/>
<xsd:element name="lowpass" type="xsd:positiveInteger"/>
<xsd:element name="acsetting" type="TYPEacsetting"/>
<xsd:simpleType name="TYPEacsetting">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="50"/>
                <xsd:enumeration value="60"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:element name="acquisitiontype" type="TYPEacquisitiontype"/>
<xsd:element name="bitspersample" type="xsd:positiveInteger"/>
<xsd:element name="signaloffset" type="xsd:integer"/>
<xsd:element name="signalsigned" type="TYPEflag"/>
<xsd:element name="numberchannelsallocated" type="xsd:nonNegativeInteger"/>
<xsd:element name="numberchannelsvalid" type="xsd:nonNegativeInteger"/>
<xsd:element name="electrodeplacement" type="TYPEelectrodeplacement"/>
<xsd:element name="derivedleads" type="TYPEderivedleads"/>
<xsd:element name="operatorid">
        <xsd:simpleType>
```

```xml
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="room">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="bed">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="departmentid">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="departmentname">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="institutionid">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:maxLength value="32"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="institutionname">
```

```xml
<xsd:simpleType>
    <xsd:restriction base="xsd:string">
        <xsd:maxLength value="32"/>
    </xsd:restriction>
</xsd:simpleType>
</xsd:element>
<xsd:element name="facilityid">
    <xsd:simpleType>
        <xsd:restriction base="xsd:string">
            <xsd:maxLength value="32"/>
        </xsd:restriction>
    </xsd:simpleType>
</xsd:element>
<xsd:element name="facilityname">
    <xsd:simpleType>
        <xsd:restriction base="xsd:string">
            <xsd:maxLength value="32"/>
        </xsd:restriction>
    </xsd:simpleType>
</xsd:element>
<xsd:simpleType name="TYPEmachine">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="Unknown"/>
        <xsd:enumeration value="HeartstartMRx"/>
        <xsd:enumeration value="IntelliVue"/>
        <xsd:enumeration value="CMS"/>
        <xsd:enumeration value="PageWriter"/>
        <xsd:enumeration value="PageWriter XL"/>
        <xsd:enumeration value="PageWriter Touch"/>
        <xsd:enumeration value="PageWriter Trim"/>
        <xsd:enumeration value="PageWriter TC"/>
        <xsd:enumeration value="5600C System"/>
        <xsd:enumeration value="M1730 System"/>
        <xsd:enumeration value="M1729 System"/>
        <xsd:enumeration value="M3700 System"/>
        <xsd:enumeration value="Holter"/>
        <xsd:enumeration value="Telemetry"/>
        <xsd:enumeration value="Stress"/>
        <xsd:enumeration value="Migrated from 5600C System"/>
        <xsd:enumeration value="Other Manufacturer System"/>
        <xsd:enumeration value="Other Manufacturer Device"/>
```

```xml
                <xsd:enumeration value="Other Philips Cardiograph"/>
                <xsd:enumeration value="Other Philips Defibrillator"/>
                <xsd:enumeration value="Other Philips Monitor"/>
                <xsd:enumeration value="Other"/>
            </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEacquisitiontype">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="MIDA"/>
                <xsd:enumeration value="EASI"/>
                <xsd:enumeration value="3-WIRE"/>
                <xsd:enumeration value="4-WIRE"/>
                <xsd:enumeration value="5-WIRE"/>
                <xsd:enumeration value="6-WIRE"/>
                <xsd:enumeration value="7-WIRE"/>
                <xsd:enumeration value="8-WIRE"/>
                <xsd:enumeration value="9-WIRE"/>
                <xsd:enumeration value="10-WIRE"/>
                <xsd:enumeration value="11-WIRE"/>
                <xsd:enumeration value="12-WIRE"/>
                <xsd:enumeration value="13-WIRE"/>
                <xsd:enumeration value="14-WIRE"/>
                <xsd:enumeration value="15-WIRE"/>
                <xsd:enumeration value="16-WIRE"/>
                <xsd:enumeration value="17-WIRE"/>
                <xsd:enumeration value="18-WIRE"/>
                <xsd:enumeration value="19-WIRE"/>
                <xsd:enumeration value="20-WIRE"/>
                <xsd:enumeration value="21-WIRE"/>
                <xsd:enumeration value="22-WIRE"/>
                <xsd:enumeration value="23-WIRE"/>
                <xsd:enumeration value="24-WIRE"/>
                <xsd:enumeration value="Other"/>
            </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEelectrodeplacement">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Unknown"/>
                <xsd:enumeration value="STD"/>
                <xsd:enumeration value="STD 12+"/>
                <xsd:enumeration value="MASON-LIKAR"/>
```

```
                        <xsd:enumeration value="MASON-LIKAR 12+"/>
                        <xsd:enumeration value="MODIFIED"/>
                        <xsd:enumeration value="MODIFIED 12+"/>
                        <xsd:enumeration value="MIDA"/>
                        <xsd:enumeration value="EASI"/>
                        <xsd:enumeration value="EASI OFF STERNUM"/>
                        <xsd:enumeration value="FRANK"/>
                        <xsd:enumeration value="NEHB"/>
                        <xsd:enumeration value="Other"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:complexType name="TYPEderivedleads">
                <xsd:simpleContent>
                        <xsd:extension base="TYPElistofleadname"/>
                </xsd:simpleContent>
        </xsd:complexType>
        <!-- end of data acquisition -->
        <!-- ============================================================================= -->
        <xsd:element name="patient">
                <xsd:complexType>
                        <xsd:sequence>
                                <xsd:element ref="generalpatientdata"/>
                                <xsd:element ref="patientmedicaldata" minOccurs="0"/>
                        </xsd:sequence>
                        <xsd:attribute name="criteriaversionforpatientdata" type="TYPEcriteriaversion" use="required"/>
                        <xsd:attribute name="customcriteriaversion" type="TYPEcustomcriteriaversion" use="optional"/>
                        <xsd:attribute name="othercriteriaversion" type="xsd:string" use="optional"/>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="generalpatientdata">
                <xsd:complexType>
                        <xsd:sequence>
                                <xsd:element ref="patientid"/>
                                <!-- optional unique patient id for internal use by the ECG management system: -->
                                <xsd:element ref="uniquepatientid" minOccurs="0"/>
                                <!-- optional Medical Record Number, if different from patientid: -->
                                <xsd:element name="MRN" type="xsd:string" minOccurs="0"/>
                                <xsd:element name="secondaryid" type="xsd:string" minOccurs="0"/>
                                <xsd:element ref="name"/>
                                <xsd:element ref="age"/>
                                <xsd:element name="pacestatus" type="TYPEpacestatus"/>
```

```xml
                    <xsd:element ref="sex"/>
                    <xsd:element ref="race" minOccurs="0"/>
                    <xsd:element ref="height" minOccurs="0"/>
                    <xsd:element ref="weight" minOccurs="0"/>
                </xsd:sequence>
            </xsd:complexType>
    </xsd:element>
    <xsd:simpleType name="TYPEageyears">
        <xsd:restriction base="xsd:nonNegativeInteger">
            <xsd:maxInclusive value="199"/>
            <xsd:minInclusive value="1"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEsex">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="Unknown"/>
            <xsd:enumeration value="Male"/>
            <xsd:enumeration value="Female"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:element name="patientmedicaldata">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="bloodpressure" minOccurs="0"/>
                <xsd:element ref="symptom" minOccurs="0" maxOccurs="4"/>
                <xsd:element ref="history" minOccurs="0" maxOccurs="4"/>
                <xsd:element ref="diagnosis" minOccurs="0" maxOccurs="4"/>
                <xsd:element ref="medication" minOccurs="0" maxOccurs="4"/>
                <xsd:element ref="drgcategory" minOccurs="0" maxOccurs="4"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="patientid">
        <xsd:simpleType>
            <xsd:restriction base="xsd:string">
                <xsd:minLength value="1"/>
                <xsd:maxLength value="40"/>
            </xsd:restriction>
        </xsd:simpleType>
    </xsd:element>
    <xsd:element name="uniquepatientid" type="xsd:string"/>
```

```xml
<xsd:element name="name">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="lastname" minOccurs="0"/>
                        <xsd:element ref="firstname" minOccurs="0"/>
                        <xsd:element ref="middlename" minOccurs="0"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="lastname">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="40"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="firstname">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="40"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="middlename">
        <xsd:simpleType>
                <xsd:restriction base="xsd:string">
                        <xsd:maxLength value="40"/>
                </xsd:restriction>
        </xsd:simpleType>
</xsd:element>
<xsd:element name="age">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:choice>
                                <xsd:element ref="dateofbirth" minOccurs="0"/>
                                <xsd:element ref="years" minOccurs="0"/>
                                <xsd:element ref="months" minOccurs="0"/>
                                <xsd:element ref="weeks" minOccurs="0"/>
                                <xsd:element ref="days" minOccurs="0"/>
                                <xsd:element ref="hours" minOccurs="0"/>
                                <xsd:element ref="minutes" minOccurs="0"/>
```

```xml
                    </xsd:choice>
                </xsd:sequence>
                <xsd:attribute name="defaultage" type="TYPEageyears" use="optional"/>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="dateofbirth" type="TYPEdate"/>
        <xsd:element name="years" type="TYPEageyears"/>
        <xsd:element name="months" type="xsd:positiveInteger"/>
        <xsd:element name="weeks" type="xsd:positiveInteger"/>
        <xsd:element name="days" type="xsd:positiveInteger"/>
        <xsd:element name="hours" type="xsd:positiveInteger"/>
        <xsd:element name="minutes" type="xsd:positiveInteger"/>
        <xsd:element name="sex" type="TYPEsex"/>
        <xsd:element name="race">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="xsd:string">
                        <xsd:attribute name="code" type="xsd:NMTOKENS" use="optional"/>
                        <xsd:attribute name="id" type="xsd:NMTOKENS" use="required"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="height">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:choice>
                        <xsd:element name="cm" type="TYPEheight"/>
                        <xsd:element name="inch" type="TYPEheight"/>
                    </xsd:choice>
                </xsd:sequence>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="weight">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:choice>
                        <xsd:element name="kg" type="TYPEweight"/>
                        <xsd:element name="lb" type="TYPEweight"/>
                    </xsd:choice>
                </xsd:sequence>
```

```xml
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="bloodpressure">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="systolic"/>
                <xsd:element ref="diastolic"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="systolic">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element name="mmHg" type="TYPEbp"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="diastolic">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element name="mmHg" type="TYPEbp"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="symptom">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                    <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
                    <xsd:attribute name="value" type="xsd:string" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="history">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                    <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
```

```xml
                    <xsd:attribute name="value" type="xsd:string" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="diagnosis">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                    <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
                    <xsd:attribute name="value" type="xsd:string" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="medication">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="code" type="xsd:NMTOKEN" use="optional"/>
                    <xsd:attribute name="id" type="xsd:NMTOKEN" use="required"/>
                    <xsd:attribute name="value" type="xsd:string" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="pt_race">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="code" type="xsd:NMTOKENS" use="optional"/>
                    <xsd:attribute name="id" type="xsd:NMTOKENS" use="required"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="dx">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
```

```xml
            <xsd:attribute name="code" type="xsd:NMTOKEN" use="required"/>
            <xsd:attribute name="id" type="xsd:NMTOKEN" use="optional"/>
        </xsd:extension>
    </xsd:simpleContent>
</xsd:complexType>
</xsd:element>
<xsd:element name="rx">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:string">
                <xsd:attribute name="code" type="xsd:NMTOKEN" use="required"/>
                <xsd:attribute name="id" type="xsd:NMTOKEN" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<!-- end of patient -->
<!-- ========================================================================== -->
<xsd:element name="internalmeasurements">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="crossleadmeasurements" minOccurs="0"/>
            <xsd:element ref="groupmeasurements" minOccurs="0"/>
            <xsd:element ref="leadmeasurements" minOccurs="0"/>
            <xsd:element ref="configsettings" minOccurs="0"/>
        </xsd:sequence>
        <xsd:attribute name="date" type="xsd:date" use="required"/>
        <xsd:attribute name="time" type="xsd:time" use="required"/>
        <xsd:attribute name="measurementversion" type="TYPEmeasurementversion" use="required"/>
        <xsd:attribute name="custommeasurementversion" type="TYPEcustommeasurementversion" use="optional"/>
    </xsd:complexType>
</xsd:element>
<xsd:simpleType name="TYPEmeasurementversion">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="7"/>
        <xsd:enumeration value="8"/>
        <xsd:enumeration value="9"/>
        <xsd:enumeration value="A"/>
        <xsd:enumeration value="B"/>
        <xsd:enumeration value="C"/>
        <xsd:enumeration value="D"/>
```

```xml
<xsd:enumeration value="E"/>
<xsd:enumeration value="F"/>
<xsd:enumeration value="10"/>
<xsd:enumeration value="11"/>
<xsd:enumeration value="12"/>
<xsd:enumeration value="13"/>
<xsd:enumeration value="14"/>
<xsd:enumeration value="15"/>
<xsd:enumeration value="Custom"/>
<xsd:enumeration value="Other Manufacturer"/>
<xsd:enumeration value="Other"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:element name="crossleadmeasurements">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:group ref="crossleadmeasurements.elements"/>
            </xsd:sequence>
            <xsd:attribute name="fixedmultpflag" type="TYPEflag" use="optional"/>
            <xsd:attribute name="multptestvalidflag" type="TYPEflag" use="optional"/>
            <xsd:attribute name="qrslikeartfflag" type="TYPEflag" use="optional"/>
            <xsd:attribute name="pacebeatmeasflag" type="TYPEflag" use="optional"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:group name="crossleadmeasurements.elements">
        <xsd:sequence>
            <!-- if any pacepulses are detected, this should be a list of leads on which the pacepulse detector was run; -->
            <!-- whether or not that particular lead detected any pace pulses: -->
            <!-- (some devices run the pace pulse detector on all leads, others run it only on some leads) -->
            <xsd:element ref="pacedetectleads" minOccurs="0"/>
            <xsd:element ref="pacepulses" minOccurs="0"/>
            <xsd:element ref="pacemode" minOccurs="0"/>
            <xsd:element ref="pacemalf" minOccurs="0"/>
            <xsd:element ref="pacemisc" minOccurs="0"/>
            <xsd:element ref="ectopicrhythm" minOccurs="0"/>
            <xsd:element ref="qtintdispersion" minOccurs="0"/>
            <xsd:element ref="numberofcomplexes" minOccurs="0"/>
            <xsd:element ref="numberofgroups" minOccurs="0"/>
            <xsd:element ref="beatclassification" minOccurs="0"/>
            <xsd:element ref="qamessagecodes" minOccurs="0"/>
            <xsd:element ref="qaactioncode" minOccurs="0"/>
```

```xml
<xsd:element ref="pfrontaxis" minOccurs="0"/>
<xsd:element ref="phorizaxis" minOccurs="0"/>
<xsd:element ref="i40frontaxis" minOccurs="0"/>
<xsd:element ref="i40horizaxis" minOccurs="0"/>
<xsd:element ref="qrsfrontaxis" minOccurs="0"/>
<xsd:element ref="qrshorizaxis" minOccurs="0"/>
<xsd:element ref="t40frontaxis" minOccurs="0"/>
<xsd:element ref="t40horizaxis" minOccurs="0"/>
<xsd:element ref="stfrontaxis" minOccurs="0"/>
<xsd:element ref="sthorizaxis" minOccurs="0"/>
<xsd:element ref="tfrontaxis" minOccurs="0"/>
<xsd:element ref="thorizaxis" minOccurs="0"/>
<xsd:element ref="atrialrate" minOccurs="0"/>
<xsd:element ref="lowventrate" minOccurs="0"/>
<xsd:element ref="meanventrate" minOccurs="0"/>
<xsd:element ref="highventrate" minOccurs="0"/>
<xsd:element ref="meanprint" minOccurs="0"/>
<xsd:element ref="meanprseg" minOccurs="0"/>
<xsd:element ref="meanqrsdur" minOccurs="0"/>
<xsd:element ref="meanqtint" minOccurs="0"/>
<xsd:element ref="meanqtc" minOccurs="0"/>
<xsd:element ref="deltawavecount" minOccurs="0"/>
<xsd:element ref="deltawavepercent" minOccurs="0"/>
<xsd:element ref="bigeminycount" minOccurs="0"/>
<xsd:element ref="bigeminystring" minOccurs="0"/>
<xsd:element ref="trigeminycount" minOccurs="0"/>
<xsd:element ref="trigeminystring" minOccurs="0"/>
<xsd:element ref="wenckcount" minOccurs="0"/>
<xsd:element ref="wenckstring" minOccurs="0"/>
<xsd:element ref="flutterfibcount" minOccurs="0"/>
<!-- additional algorithm variables: -->
<!-- lead reversal code: -->
<xsd:element name="leadreversalcode" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- atrial rhythm code: -->
<xsd:element name="atrialrhythm" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- atrial rate (beats per minute) from the power spectrum/ autocorrelation of the QRST residual: -->
<xsd:element name="atrialratepowerspect" type="TYPErate" minOccurs="0"/>
<!-- ventricular rhythm code -->
<xsd:element name="ventrhythm" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- percentage of beats with random RR interval variation: -->
<xsd:element name="randomrrpercent" type="TYPEpercent" minOccurs="0"/>
```

```xml
<!-- percentage of beats with regular RR interals: -->
<xsd:element name="regularrrpercent" type="TYPEpercent" minOccurs="0"/>
<!-- percentage of beats in the largest RR interval cluster: -->
<xsd:element name="biggestrrgrouppercent" type="TYPEpercent" minOccurs="0"/>
<!-- variation (std.dev./mean) of RR intervals in the largest RR cluster: -->
<xsd:element name="biggestrrgroupvar" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- total number of RR interval groups or clusters: -->
<xsd:element name="nrrgroups" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- height of RR interval ACF peak in percent: -->
<xsd:element name="bigemrrintvlacf" type="TYPEpercent" minOccurs="0"/>
<!-- height of RR interval ACF peak in percent: -->
<xsd:element name="trigemrrintvlacf" type="TYPEpercent" minOccurs="0"/>
<!-- atrial fibrillation (Afib) frequency from the power spectral density (PSD): -->
<xsd:element name="fibfreqmhz" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- amplitude of afib-peak frequency component of the PSD: -->
<xsd:element name="fibampnv" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- 10dB width of the afib-peak frequency component of the PSD: -->
<xsd:element name="fibwidthmhz" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- median frequency from the PSD, half power above, half power below -->
<xsd:element name="fibmedianfreqmhz" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- cycle length taken from the atrial signal autocorrelation function (ACF): -->
<xsd:element name="afltcyclelen" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- height of percent-normalized cycle-length ACF peak, 0-100%: -->
<xsd:element name="afltacfpeak" type="TYPEpercent" minOccurs="0"/>
<!-- width of cycle-length ACF peak in millisec: -->
<xsd:element name="afltacfpeakwidth" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- percentage of all P waves or F waves that have the same shape: -->
<xsd:element name="constantpshapepct" type="TYPEpercent" minOccurs="0"/>
<!-- error of P to P intervals compared to avg. PP interval: -->
<xsd:element name="atrialrateirregpct" type="TYPEpercent" minOccurs="0"/>
<!-- vector loop measurements: -->
<xsd:group ref="vectorloopmxs.elements" minOccurs="0"/>
<!-- preexcitation code: -->
<xsd:element name="preexcitation" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- global beat annotations: -->
<xsd:element ref="beats" minOccurs="0"/>
<!-- return code from the algorithm to the host: -->
<xsd:element name="analysiserror" type="xsd:nonNegativeInteger" minOccurs="0"/>
<!-- (localized) message string corresponding to the analysiserror code: -->
<xsd:element name="analysiserrormessage" type="xsd:string" minOccurs="0"/>
<!-- reserved for future use: -->
```

```xml
            <xsd:element ref="namedmeasurement" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:group>
    <xsd:element name="qamessagecodes">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="qamessagecode" minOccurs="0" maxOccurs="4"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="qamessagecode" type="TYPEmessagecode"/>
    <xsd:simpleType name="TYPEmessagecode">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="None"/>
            <xsd:enumeration value="Acceptable trace"/>
            <xsd:enumeration value="Check QA message history"/>
            <xsd:enumeration value="Overrange"/>
            <xsd:enumeration value="Artifact"/>
            <xsd:enumeration value="Baseline wander"/>
            <xsd:enumeration value="Missing lead(s)"/>
            <xsd:enumeration value="Phone noise"/>
            <xsd:enumeration value="AC interference"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:element name="qaactioncode" type="TYPEactioncode"/>
    <xsd:simpleType name="TYPEactioncode">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="ECG OK"/>
            <xsd:enumeration value="Poor ECG, retry if possible"/>
        </xsd:restriction>
    </xsd:simpleType>
    <!-- start of vector loop measurement definitions: ============== -->
    <xsd:group name="vectorloopmxs.elements">
        <xsd:sequence>
            <!-- Transverse (ie., Horizontal) Plane  -->
            <!-- p-wave  -->
            <xsd:element name="transpcwrot" type="TYPEcwRot" minOccurs="0"/>
            <xsd:element name="transpinitangle" type="TYPEangle" minOccurs="0"/>
            <xsd:element name="transpinitmag" type="TYPEmag" minOccurs="0"/>
            <xsd:element name="transpmaxangle" type="TYPEangle" minOccurs="0"/>
            <xsd:element name="transpmaxmag" type="TYPEmag" minOccurs="0"/>
```

```xml
<xsd:element name="transptermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transptermmag" type="TYPEmag" minOccurs="0"/>
<!-- qrs-wave -->
<xsd:element name="transqrscwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="transqrsinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transqrsinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="transqrsmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transqrsmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="transqrstermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transqrstermmag" type="TYPEmag" minOccurs="0"/>
<!-- t-wave -->
<xsd:element name="transtcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="transtinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transtinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="transtmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transtmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="transttermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="transttermmag" type="TYPEmag" minOccurs="0"/>
<!-- Frontal Plane -->
<!-- p-wave -->
<xsd:element name="frontpcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="frontpinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontpinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="frontpmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontpmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="frontptermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontptermmag" type="TYPEmag" minOccurs="0"/>
<!-- qrs-wave -->
<xsd:element name="frontqrscwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="frontqrsinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontqrsinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="frontqrsmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontqrsmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="frontqrstermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontqrstermmag" type="TYPEmag" minOccurs="0"/>
<!-- t-wave -->
<xsd:element name="fronttcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="fronttinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="fronttinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="fronttmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="fronttmaxmag" type="TYPEmag" minOccurs="0"/>
```

```
<xsd:element name="frontttermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="frontttermmag" type="TYPEmag" minOccurs="0"/>
<!-- Sagittal Plane  -->
<!-- p-wave  -->
<xsd:element name="sagpcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="sagpinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagpinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagpmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagpmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagptermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagptermmag" type="TYPEmag" minOccurs="0"/>
<!-- qrs-wave  -->
<xsd:element name="sagqrscwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="sagqrsinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagqrsinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagqrsmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagqrsmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagqrstermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagqrstermmag" type="TYPEmag" minOccurs="0"/>
<!-- t-wave  -->
<xsd:element name="sagtcwrot" type="TYPEcwRot" minOccurs="0"/>
<xsd:element name="sagtinitangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagtinitmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagtmaxangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagtmaxmag" type="TYPEmag" minOccurs="0"/>
<xsd:element name="sagttermangle" type="TYPEangle" minOccurs="0"/>
<xsd:element name="sagttermmag" type="TYPEmag" minOccurs="0"/>
        </xsd:sequence>
    </xsd:group>
<!-- score between -100(counter-clockwise) and 100(clockwise) indicating confidence: -->
<xsd:simpleType name="TYPEcwRot1">
        <xsd:restriction base="xsd:integer">
            <xsd:maxInclusive value="100"/>
            <xsd:minInclusive value="-100"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEcwRot">
        <xsd:union memberTypes="TYPEcwRot1 TYPEinvalidPlus"/>
</xsd:simpleType>
<!-- vector angle (degrees): -->
<xsd:simpleType name="TYPEangle1">
```

```
        <xsd:restriction base="xsd:integer">
                <xsd:maxInclusive value="360"/>
                <xsd:minInclusive value="-360"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEangle">
        <xsd:union memberTypes="TYPEangle1 TYPEinvalidPlus"/>
</xsd:simpleType>
<!-- vector magnitude (microvolts): -->
<xsd:simpleType name="TYPEmag1">
        <xsd:restriction base="xsd:nonNegativeInteger"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEmag">
        <xsd:union memberTypes="TYPEmag1 TYPEinvalidPlus"/>
</xsd:simpleType>
<!-- end of vector loop measurements definition =============== -->
<!-- ===================================================-->
<xsd:element name="beats">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="beat" minOccurs="0" maxOccurs="unbounded">
                                <xsd:complexType>
                                        <xsd:sequence>
                                                <xsd:element name="group" type="xsd:nonNegativeInteger"/>
                                                <xsd:element name="pon" type="TYPEfiducial" minOccurs="0"/>
                                                <xsd:element name="poff" type="TYPEfiducial" minOccurs="0"/>
                                                <xsd:element name="qon" type="TYPEfiducial" minOccurs="0"/>
                                                <xsd:element name="qoff" type="TYPEfiducial" minOccurs="0"/>
                                                <xsd:element name="ton" type="TYPEfiducial" minOccurs="0"/>
                                                <xsd:element name="toff" type="TYPEfiducial" minOccurs="0"/>
                                        </xsd:sequence>
                                </xsd:complexType>
                        </xsd:element>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<!-- ============ ====================================-->
<xsd:element name="namedmeasurement">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element name="name" type="xsd:string"/>
```

```xml
                    <xsd:element name="value" type="xsd:string"/>
                </xsd:sequence>
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="uneditedvalue" type="xsd:string" use="optional"/>
        </xsd:complexType>
</xsd:element>
<!-- end of crossleadmeasurements.elements ================================ -->
<xsd:element name="groupmeasurements">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:element ref="groupmeasurement" minOccurs="0" maxOccurs="unbounded"/>
                </xsd:sequence>
        </xsd:complexType>
</xsd:element>
<xsd:element name="groupmeasurement">
        <xsd:complexType>
                <xsd:sequence>
                        <xsd:group ref="groupmeasurement.elements"/>
                </xsd:sequence>
                <xsd:attribute name="groupnumber" use="required">
                        <xsd:simpleType>
                                <xsd:restriction base="xsd:nonNegativeInteger">
                                        <xsd:maxInclusive value="20"/>
                                        <xsd:minInclusive value="0"/>
                                </xsd:restriction>
                        </xsd:simpleType>
                </xsd:attribute>
                <xsd:attribute name="interpflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="sinusflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="prprogflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="wenckflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="bigflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="trigflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="aberrantflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="multptestflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="qrsmeasflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="atrialpaceflag" type="TYPEflagUnk" use="optional"/>
                <xsd:attribute name="ventdualpaceflag" type="TYPEflag" use="optional"/>
        </xsd:complexType>
</xsd:element>
<xsd:group name="groupmeasurement.elements">
```

```xml
<xsd:sequence>
    <xsd:element ref="membercount"/>
    <xsd:element ref="memberpercent" minOccurs="0"/>
    <xsd:element ref="longestrun" minOccurs="0"/>
    <xsd:element ref="meanqrsdur" minOccurs="0"/>
    <xsd:element ref="lowventrate" minOccurs="0"/>
    <xsd:element ref="meanventrate" minOccurs="0"/>
    <xsd:element ref="highventrate" minOccurs="0"/>
    <xsd:element ref="ventratestddev" minOccurs="0"/>
    <xsd:element ref="meanrrint" minOccurs="0"/>
    <xsd:element ref="atrialrate" minOccurs="0"/>
    <xsd:element ref="atrialratestddev" minOccurs="0"/>
    <xsd:element ref="avgpcount" minOccurs="0"/>
    <xsd:element ref="notavgpbeats" minOccurs="0"/>
    <xsd:element ref="lowprint" minOccurs="0"/>
    <xsd:element ref="meanprint" minOccurs="0"/>
    <xsd:element ref="highprint" minOccurs="0"/>
    <xsd:element ref="printstddev" minOccurs="0"/>
    <xsd:element ref="meanprseg" minOccurs="0"/>
    <xsd:element ref="meanqtint" minOccurs="0"/>
    <xsd:element ref="meanqtseg" minOccurs="0"/>
    <xsd:element ref="comppausecount" minOccurs="0"/>
    <!-- reserved for future use: -->
    <xsd:element ref="namedmeasurement" minOccurs="0" maxOccurs="unbounded"/>
</xsd:sequence>
</xsd:group>
<!-- ============================================ -->
<xsd:element name="leadmeasurements">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="leadmeasurement" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="leadmeasurement">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="pacepulses" minOccurs="0"/>
            <xsd:group ref="leadmeasurement.elements"/>
        </xsd:sequence>
        <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
```

```
                    <xsd:attribute name="pexistflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="pmeasflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="pnotchflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="qrsexistflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="qrsspikeflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="qrsmeasflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="qrsnotchflag" type="TYPEnotch" use="optional"/>
                    <xsd:attribute name="qrsdeltaflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="stexistflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="stmeasflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="texistflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="tmeasflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="tnotchflag" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="atrialpaceflag" type="TYPEflagUnk" use="optional"/>
                    <xsd:attribute name="ventpaceflag" type="TYPEflag" use="optional"/>
            </xsd:complexType>
    </xsd:element>
    <xsd:group name="leadmeasurement.elements">
            <xsd:sequence>
                    <xsd:element ref="leadqualitystates" minOccurs="0"/>
                    <xsd:element ref="pamp" minOccurs="0"/>
                    <xsd:element ref="pdur" minOccurs="0"/>
                    <xsd:element ref="parea" minOccurs="0"/>
                    <xsd:element ref="ppamp" minOccurs="0"/>
                    <xsd:element ref="ppdur" minOccurs="0"/>
                    <xsd:element ref="ppppdur" minOccurs="0"/>
                    <xsd:element ref="pparea" minOccurs="0"/>
                    <xsd:element ref="pppparea" minOccurs="0"/>
                    <xsd:element ref="qamp" minOccurs="0"/>
                    <xsd:element ref="qdur" minOccurs="0"/>
                    <xsd:element ref="ramp" minOccurs="0"/>
                    <xsd:element ref="rdur" minOccurs="0"/>
                    <xsd:element ref="samp" minOccurs="0"/>
                    <xsd:element ref="sdur" minOccurs="0"/>
                    <xsd:element ref="rpamp" minOccurs="0"/>
                    <xsd:element ref="rpdur" minOccurs="0"/>
                    <xsd:element ref="spamp" minOccurs="0"/>
                    <xsd:element ref="spdur" minOccurs="0"/>
                    <xsd:element ref="vat" minOccurs="0"/>
                    <xsd:element ref="qrsppk" minOccurs="0"/>
                    <xsd:element ref="qrsdur" minOccurs="0"/>
```

```xml
<xsd:element ref="qrsarea" minOccurs="0"/>
<xsd:element ref="ston" minOccurs="0"/>
<xsd:element ref="stmid" minOccurs="0"/>
<xsd:element ref="st80" minOccurs="0"/>
<xsd:element ref="stend" minOccurs="0"/>
<xsd:element ref="stdur" minOccurs="0"/>
<xsd:element ref="stslope" minOccurs="0"/>
<xsd:element ref="stshape" minOccurs="0"/>
<xsd:element ref="tamp" minOccurs="0"/>
<xsd:element ref="tdur" minOccurs="0"/>
<xsd:element ref="tarea" minOccurs="0"/>
<xsd:element ref="tpamp" minOccurs="0"/>
<xsd:element ref="tptpdur" minOccurs="0"/>
<xsd:element ref="tpdur" minOccurs="0"/>
<xsd:element ref="tparea" minOccurs="0"/>
<xsd:element ref="tptparea" minOccurs="0"/>
<xsd:element ref="print" minOccurs="0"/>
<xsd:element ref="prseg" minOccurs="0"/>
<xsd:element ref="qtint" minOccurs="0"/>
<xsd:element ref="beats" minOccurs="0"/>
<!-- reserved for future use: -->
<xsd:element ref="namedmeasurement" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:group>
<!-- algorithm configuration settings needed if the ECG is ever re-analyzed by the diagnostic algorithm: -->
<xsd:element name="configsettings">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="bradyhrlimit" type="TYPEintegerORnull" minOccurs="0"/>
            <xsd:element name="asianlvhcriteria" type="TYPEflag" minOccurs="0"/>
            <xsd:element name="qualitystmts" type="TYPEintegerORnull" minOccurs="0"/>
            <xsd:element name="sensitivity" type="TYPEintegerORnull" minOccurs="0"/>
            <xsd:element ref="configsetting" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<!-- for future use: -->
<xsd:element name="configsetting">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="name" type="xsd:string"/>
```

```xml
            <xsd:element name="value" type="xsd:string"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="leadqualitystates">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="inops" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="saturations" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="baseartifacts" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="acartifacts" minOccurs="0" maxOccurs="unbounded"/>
            <xsd:element ref="muscleartifacts" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
        <xsd:attribute name="qrsclippingflag" type="TYPEflag" use="required"/>
        <xsd:attribute name="overrangeflag" type="TYPEflag" use="required"/>
        <xsd:attribute name="measuredflag" type="TYPEflag" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="inops">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="inop" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="saturations">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="saturation" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="baseartifacts">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="baseartifact" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
        <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="acartifacts">
```

```
<xsd:complexType>
    <xsd:sequence>
        <xsd:element ref="acartifact" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
    <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
</xsd:complexType>
</xsd:element>
<xsd:element name="muscleartifacts">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="muscleartifact" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
        <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="inop">
    <xsd:complexType>
        <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
        <xsd:attribute name="duration" type="TYPEduration" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="saturation">
    <xsd:complexType>
        <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
        <xsd:attribute name="duration" type="TYPEduration" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="baseartifact">
    <xsd:complexType>
        <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
        <xsd:attribute name="duration" type="TYPEduration" use="required"/>
        <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="acartifact">
    <xsd:complexType>
        <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
        <xsd:attribute name="duration" type="TYPEduration" use="required"/>
        <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
    </xsd:complexType>
</xsd:element>
```

```xml
<xsd:element name="muscleartifact">
    <xsd:complexType>
        <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
        <xsd:attribute name="duration" type="TYPEduration" use="required"/>
        <xsd:attribute name="level" type="TYPEnoiselevel" use="required"/>
    </xsd:complexType>
</xsd:element>
<!-- ========================================================================= -->
<xsd:element name="interpretations">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="interpretation" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="interpretation">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="serialcomparison" minOccurs="0"/>
            <xsd:element ref="interpretationdatastructure" minOccurs="0"/>
            <xsd:element ref="globalmeasurements" minOccurs="0"/>
            <xsd:element ref="mdsignatureline" minOccurs="0"/>
            <!-- name with @id of the most recent confirming clinician (with @date and @time of confirmation) -->
            <xsd:element name="confirmingclinician" type="TYPEpersonwithdatetime" minOccurs="0"/>
            <xsd:element ref="severity" minOccurs="0"/>
            <xsd:element ref="statement" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
        <xsd:attribute name="date" type="xsd:date" use="required"/>
        <xsd:attribute name="time" type="xsd:time" use="required"/>
        <xsd:attribute name="criteriaversion" type="TYPEcriteriaversion" use="required"/>
        <xsd:attribute name="criteriaversiondate" type="xsd:date" use="optional"/>
        <xsd:attribute name="customcriteriaversion" type="TYPEcustomcriteriaversion" use="optional"/>
        <xsd:attribute name="othercriteriaversion" type="xsd:string" use="optional"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="serialcomparison">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="previousecg" minOccurs="0">
                <xsd:complexType>
                    <xsd:sequence>
```

```xml
                    <xsd:element name="documentname" type="xsd:string"/>
                    <xsd:element ref="severity"/>
                    <xsd:element name="mdsignatureline" type="xsd:string"/>
                    <xsd:element name="compareinfostatement" type="xsd:string"/>
                </xsd:sequence>
                <xsd:attribute name="date" type="xsd:date" use="required"/>
                <xsd:attribute name="time" type="xsd:time" use="required"/>
                <xsd:attribute name="status" type="TYPErestingecgstatus" use="required"/>
            </xsd:complexType>
        </xsd:element>
    </xsd:sequence>
    <xsd:attribute name="date" type="xsd:date" use="required"/>
    <xsd:attribute name="time" type="xsd:time" use="required"/>
    <xsd:attribute name="scalgversion" type="xsd:string" use="required"/>
    <xsd:attribute name="scalgversiondate" type="xsd:date" use="optional"/>
    <xsd:attribute name="scstatementversion" type="xsd:string" use="optional"/>
    <xsd:attribute name="scstatementversiondate" type="xsd:date" use="optional"/>
</xsd:complexType>
</xsd:element>
<xsd:element name="globalmeasurements">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element name="heartrate">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPErate">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPErate" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="rrint">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEduration">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
```

```xml
            </xsd:element>
            <xsd:element name="atrialrate" minOccurs="0">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPErate">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPErate" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="pdur" minOccurs="0">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEduration">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="print">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEduration">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="qonset">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEfiducial">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEfiducial" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
```

```
<xsd:element name="qrsdur">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPEduration">
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="tonset" minOccurs="0">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPEfiducial">
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="uneditedvalue" type="TYPEfiducial" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="qtint">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPEduration">
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="qtcb">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPEduration">
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="qtcf" minOccurs="0">
```

```xml
<xsd:complexType>
    <xsd:simpleContent>
        <xsd:extension base="TYPEduration">
            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
            <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
        </xsd:extension>
    </xsd:simpleContent>
</xsd:complexType>
</xsd:element>
<xsd:element name="qtco" minOccurs="0" maxOccurs="unbounded">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPEduration">
                <xsd:attribute name="methodname" type="xsd:string" use="required"/>
                <xsd:attribute name="label" type="xsd:string" use="required"/>
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<!-- list of leads ordered by stability of the T wave offset measurement on that lead; most stable comes first -->
<xsd:element name="toffsetstabilityrank" minOccurs="0">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPElistofleadname"/>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="pfrontaxis">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPEaxis">
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="i40frontaxis" minOccurs="0">
    <xsd:complexType>
```

```
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="t40frontaxis" minOccurs="0">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="qrsfrontaxis">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="stfrontaxis" minOccurs="0">
                <xsd:complexType>
                    <xsd:simpleContent>
                        <xsd:extension base="TYPEaxis">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                        </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
            </xsd:element>
            <xsd:element name="tfrontaxis">
                <xsd:complexType>
                    <xsd:simpleContent>
```

```
                    <xsd:extension base="TYPEaxis">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="phorizaxis" minOccurs="0">
        <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="TYPEaxis">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="i40horizaxis" minOccurs="0">
        <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="TYPEaxis">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="t40horizaxis" minOccurs="0">
        <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="TYPEaxis">
                            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                            <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                    </xsd:extension>
                </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:element name="qrshorizaxis" minOccurs="0">
        <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="TYPEaxis">
```

```xml
                                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                            </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="sthorizaxis" minOccurs="0">
                <xsd:complexType>
                    <xsd:simpleContent>
                            <xsd:extension base="TYPEaxis">
                                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                            </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="thorizaxis" minOccurs="0">
                <xsd:complexType>
                    <xsd:simpleContent>
                            <xsd:extension base="TYPEaxis">
                                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="uneditedvalue" type="TYPEaxis" use="optional"/>
                            </xsd:extension>
                    </xsd:simpleContent>
                </xsd:complexType>
        </xsd:element>
        <!-- reserved for future use: -->
        <xsd:element ref="namedmeasurement" minOccurs="0" maxOccurs="unbounded"/>
    </xsd:sequence>
    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
    <!-- globalmeasurements @editedflag will be "True" if ANY global measurement has been edited -->
  </xsd:complexType>
</xsd:element>
<!-- the ECG is confirmed by, or for, a confirming clinician;
        the element holds the person's ID (eg., logname or UPIN);
            @date of the confirmation
            @time of the confirmation -->
<xsd:simpleType name="TYPEcriteriaversion">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="01"/>
        <xsd:enumeration value="02"/>
```

```xml
            <xsd:enumeration value="03"/>
            <xsd:enumeration value="04"/>
            <xsd:enumeration value="05"/>
            <xsd:enumeration value="06"/>
            <xsd:enumeration value="07"/>
            <xsd:enumeration value="08"/>
            <xsd:enumeration value="09"/>
            <xsd:enumeration value="0A"/>
            <xsd:enumeration value="0B"/>
            <xsd:enumeration value="0C"/>
            <xsd:enumeration value="0D"/>
            <xsd:enumeration value="0E"/>
            <xsd:enumeration value="0F"/>
            <xsd:enumeration value="10"/>
            <xsd:enumeration value="11"/>
            <xsd:enumeration value="12"/>
            <xsd:enumeration value="13"/>
            <xsd:enumeration value="14"/>
            <xsd:enumeration value="15"/>
            <xsd:enumeration value="16"/>
            <xsd:enumeration value="17"/>
            <xsd:enumeration value="18"/>
            <xsd:enumeration value="19"/>
            <xsd:enumeration value="1A"/>
            <xsd:enumeration value="P2"/>
            <xsd:enumeration value="P3"/>
            <xsd:enumeration value="P4"/>
            <xsd:enumeration value="H0"/>
            <xsd:enumeration value="H8"/>
            <xsd:enumeration value="T0"/>
            <xsd:enumeration value="T8"/>
            <xsd:enumeration value="V8"/>
            <xsd:enumeration value="S9"/>
            <xsd:enumeration value="None"/>
            <xsd:enumeration value="Unknown"/>
            <xsd:enumeration value="Custom"/>
            <xsd:enumeration value="Other"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:element name="severity">
        <xsd:complexType>
```

```xml
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="code" type="xsd:string" use="optional"/>
                    <xsd:attribute name="id" type="xsd:nonNegativeInteger" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="interpretationdatastructure">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="statementcomponents" minOccurs="0"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="modifiers">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element name="modifier" minOccurs="0" maxOccurs="3">
                    <xsd:complexType>
                        <xsd:simpleContent>
                            <xsd:extension base="xsd:string">
                                <xsd:attribute name="numericcode" type="xsd:nonNegativeInteger" use="required"/>
                                <xsd:attribute name="modifiercode" type="xsd:string" use="required"/>
                                <xsd:attribute name="added" type="TYPEflag" use="optional"/>
                                <xsd:attribute name="deleted" type="TYPEflag" use="optional"/>
                                <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
                            </xsd:extension>
                        </xsd:simpleContent>
                    </xsd:complexType>
                </xsd:element>
            </xsd:sequence>
            <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="scmodifiers">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element name="scmodifier" minOccurs="0">
                    <xsd:complexType>
                        <xsd:simpleContent>
```

```
                    <xsd:extension base="xsd:string">
                         <xsd:attribute name="scnumericcode" type="xsd:nonNegativeInteger" use="required"/>
                         <xsd:attribute name="scmodifiercode" type="xsd:string" use="required"/>
                         <xsd:attribute name="added" type="TYPEflag" use="optional"/>
                         <xsd:attribute name="deleted" type="TYPEflag" use="optional"/>
                    </xsd:extension>
               </xsd:simpleContent>
          </xsd:complexType>
     </xsd:element>
</xsd:sequence>
<xsd:attribute name="changed" type="TYPEflag" use="optional"/>
     </xsd:complexType>
</xsd:element>
<xsd:element name="variables">
     <xsd:complexType>
          <xsd:sequence minOccurs="0" maxOccurs="4">
               <xsd:choice>
                    <xsd:element ref="numericvalue"/>
                    <xsd:element ref="listofECGlead"/>
                    <xsd:element ref="groupofECGlead"/>
               </xsd:choice>
          </xsd:sequence>
          <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
     </xsd:complexType>
</xsd:element>
<xsd:element name="numericvalue">
     <xsd:complexType>
          <xsd:simpleContent>
               <xsd:extension base="xsd:string">
                    <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="ndigits" type="xsd:nonNegativeInteger" use="required"/>
                    <xsd:attribute name="nprecision" type="xsd:nonNegativeInteger" use="required"/>
               </xsd:extension>
          </xsd:simpleContent>
     </xsd:complexType>
</xsd:element>
<xsd:element name="unparsedstatement">
     <xsd:complexType>
          <xsd:sequence>
               <xsd:element name="lhsstatement" type="xsd:string"/>
               <xsd:element name="rhsstatement" type="xsd:string"/>
```

```
                </xsd:sequence>
                <xsd:attribute name="statementnumber" type="xsd:nonNegativeInteger" use="required"/>
                <xsd:attribute name="code" type="xsd:string" use="required"/>
                <xsd:attribute name="format" type="TYPEformat" use="required"/>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="codedstatement">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element ref="modifiers"/>
                    <xsd:element ref="scmodifiers"/>
                    <xsd:element ref="variables"/>
                    <xsd:element ref="unparsedstatement"/>
                </xsd:sequence>
                <xsd:attribute name="source" type="TYPEcodedstatementsource" use="required"/>
                <xsd:attribute name="subtype" type="TYPEstatementsubtype" use="required"/>
                <xsd:attribute name="deleted" type="TYPEflag" use="optional"/>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="uncodedstatement">
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="xsd:string">
                        <xsd:attribute name="source" type="TYPEuncodedstatementsource" use="required"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="qualitystatement">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element ref="modifiers"/>
                    <xsd:element ref="variables"/>
                    <xsd:element ref="unparsedstatement"/>
                </xsd:sequence>
                <xsd:attribute name="source" type="TYPEqualitystatementsource" use="required"/>
                <xsd:attribute name="subtype" type="TYPEstatementsubtype" use="required"/>
                <xsd:attribute name="deleted" type="TYPEflag" use="optional"/>
            </xsd:complexType>
        </xsd:element>
        <xsd:element name="remarkstatement">
```

```xml
            <xsd:complexType>
                <xsd:simpleContent>
                    <xsd:extension base="xsd:string">
                        <xsd:attribute name="source" type="TYPEremarkstatementsource" use="required"/>
                    </xsd:extension>
                </xsd:simpleContent>
            </xsd:complexType>
    </xsd:element>
    <xsd:element name="statementcomponents">
        <xsd:complexType>
            <xsd:sequence minOccurs="0" maxOccurs="unbounded">
                <xsd:choice>
                    <xsd:element ref="codedstatement"/>
                    <xsd:element ref="uncodedstatement"/>
                    <xsd:element ref="qualitystatement"/>
                    <xsd:element ref="remarkstatement"/>
                </xsd:choice>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="statement">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="statementcode"/>
                <xsd:element ref="leftstatement"/>
                <xsd:element ref="rightstatement"/>
            </xsd:sequence>
            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:element name="statementcode" type="xsd:string"/>
    <xsd:element name="leftstatement" type="xsd:string"/>
    <xsd:element name="rightstatement" type="xsd:string"/>
    <xsd:simpleType name="TYPEstatementsource">
        <xsd:restriction base="xsd:string">
            <xsd:whiteSpace value="collapse"/>
            <xsd:enumeration value=""/>
            <xsd:enumeration value="Analysis program"/>
            <xsd:enumeration value="Quality monitor"/>
            <xsd:enumeration value="Serial comparison"/>
            <xsd:enumeration value="Editor"/>
```

```
                <xsd:enumeration value="Migration"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEstatementsubtype">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Analysis"/>
                <xsd:enumeration value="Serial comparison"/>
                <xsd:enumeration value="Other"/>
                <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEunparsedstatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEcodedstatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEuncodedstatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEqualitystatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEremarkstatementsource">
        <xsd:restriction base="TYPEstatementsource"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEformat">
        <xsd:restriction base="xsd:string">
                <xsd:enumeration value="Narrow"/>
                <xsd:enumeration value="Wide"/>
        </xsd:restriction>
</xsd:simpleType>
<!-- end of interpretations -->
<!-- ========================================================================= -->
<xsd:element name="waveforms">
        <xsd:complexType>
                <xsd:sequence>
                        <!-- waveforms in this file: -->
                        <xsd:element ref="parsedwaveforms" minOccurs="0"/>
                        <!-- waveforms external to this file: -->
                        <xsd:element ref="unparsedwaveforms" minOccurs="0"/>
```

<!-- individual lead waveforms in this file: -->

<xsd:element ref="leadwaveforms" minOccurs="0" maxOccurs="unbounded"/>

<!-- vector waveforms in this file: -->

<xsd:element ref="vcgs" minOccurs="0"/>

<!-- representative beat waveforms in this file: -->

<xsd:element ref="repbeats" minOccurs="0"/>

<!-- waveform annotations: -->

<xsd:element ref="annotations" minOccurs="0"/>

</xsd:sequence>

</xsd:complexType>

</xsd:element>

<!-- parsedwaveforms ======================= -->

<xsd:annotation>

<xsd:documentation>

This is the ECG waveform data which is contained in this file.

All the data for channel (i.e., "lead") 1 comes first, followed by all the data for channel 2, etc.

Attributes:

@dataencoding: how the data is encoded: eg., "Base64".

Use "Plain" for sample values in ascii: "10 20 35...." .

@compression: name the type of compression if the data is compressed

(e.g., "XLI" for standard Philips cardiograph compression; if not compressed, omit this attribute) .

@numberofleads: number of channels or "leads".

@leadlabels: list of lead labels, with a space as separator, eg., "I II III aVR aVL aVF V1 V2 V3 V4 V5 V6".

@durationperchannel: duration per channel in milliseconds, eg., 11000 for 11 sec.

@samplespersecond: samples per second.

@resolution: amplitude resolution (of least significant bit), in uV (eg., 5).

@signaloffset: value to be subtracted from each sample point; assume 0 if not present

@signalsigned: "True" if sample values are signed values

@bitspersample: the number of bits in each sample, e.g., 16 for short integer;

note that this is NOT the number of bits of the A/D converter, but is the word size of the waveform values.

@hipass: high pass frequency bandwidth of the waveform, Hz (eg., 0.05).

@lowpass: low pass frequency bandwidth of the waveform, Hz (eg., 150).

@notchfiltered: set "True" if the notch filter has been applied to the waveform data.

@notchfilterfreqs: if notch filtered, this is a list of powerline filter frequencies

(eg., "60", or main plus harmonics "60 120 180").

@artfiltered: set "True" if data has been filtered by the speical Philips "artifact" filter

@waveformmodified: set "True" if the waveform has been modified since the original data acquisition.

@modifiedby: the device or system which has modified the wavefrom since original data acquisition.

@up/down sampled: set "True" if the waveform sample rate has been changed since data acquisition.

@up/down samplemethod: describes up/down sample method, eg., "linear interpolation".

@donotfilter: set "True" if data should not be filtered under any circumstances, but should

be displayed "as is".

@donotanalyze: set "True" if data should not be re-analyzed by a diagnostic algorithm under
any circumstances.

@otherdescription: for future use if needed.

                                                                 </xsd:documentation>

</xsd:annotation>

<xsd:element name="parsedwaveforms">

    <xsd:complexType>

        <xsd:simpleContent>

            <xsd:extension base="xsd:string">

                <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>

                <xsd:attribute name="compression" type="xsd:string" use="optional"/>

                <xsd:attribute name="numberofleads" type="xsd:positiveInteger" use="required"/>

                <xsd:attribute name="leadlabels" type="TYPElistofleadname" use="required"/>

                <xsd:attribute name="durationperchannel" type="TYPEduration" use="required"/>

                <xsd:attribute name="samplespersecond" type="xsd:float" use="required"/>

                <xsd:attribute name="resolution" type="xsd:float" use="required"/>

                <xsd:attribute name="signaloffset" type="xsd:integer" use="optional"/>

                <xsd:attribute name="signalsigned" type="TYPEflag" use="required"/>

                <xsd:attribute name="bitspersample" type="xsd:positiveInteger" use="required"/>

                <xsd:attribute name="hipass" type="xsd:float" use="required"/>

                <xsd:attribute name="lowpass" type="xsd:integer" use="required"/>

                <xsd:attribute name="notchfiltered" type="TYPEflag" use="required"/>

                <xsd:attribute name="notchfilterfreqs" type="xsd:string" use="optional"/>

                <xsd:attribute name="artfiltered" type="TYPEflag" use="optional"/>

                <xsd:attribute name="waveformmodified" type="TYPEflag" use="optional"/>

                <xsd:attribute name="modifiedby" type="xsd:string" use="optional"/>

                <xsd:attribute name="upsampled" type="TYPEflag" use="optional"/>

                <xsd:attribute name="upsamplemethod" type="xsd:string" use="optional"/>

                <xsd:attribute name="downsampled" type="TYPEflag" use="optional"/>

                <xsd:attribute name="downsamplemethod" type="xsd:string" use="optional"/>

                <xsd:attribute name="donotfilter" type="TYPEflag" use="optional"/>

                <xsd:attribute name="donotanalyze" type="TYPEflag" use="optional"/>

                <xsd:attribute name="otherinfo" type="xsd:string" use="optional"/>

            </xsd:extension>

        </xsd:simpleContent>

    </xsd:complexType>

</xsd:element>

<!--unparsedwaveforms ==================== -->

<xsd:annotation>

    <xsd:documentation>

This is the ECG waveform data which is NOT contained in this file, but is referenced through a link (href).

See parsedwaveforms for attribute explanations.
```
        </xsd:documentation>
    </xsd:annotation>
    <xsd:element name="unparsedwaveforms">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="href" type="xsd:string" use="required"/>
                    <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
                    <xsd:attribute name="compression" type="xsd:string" use="optional"/>
                    <xsd:attribute name="numberofleads" type="xsd:positiveInteger" use="required"/>
                    <xsd:attribute name="leadlabels" type="TYPElistofleadname" use="required"/>
                    <xsd:attribute name="durationperchannel" type="TYPEduration" use="required"/>
                    <xsd:attribute name="samplespersecond" type="xsd:float" use="required"/>
                    <xsd:attribute name="resolution" type="xsd:float" use="required"/>
                    <xsd:attribute name="signaloffset" type="xsd:integer" use="optional"/>
                    <xsd:attribute name="signalsigned" type="TYPEflag" use="required"/>
                    <xsd:attribute name="bitspersample" type="xsd:positiveInteger" use="required"/>
                    <xsd:attribute name="hipass" type="xsd:float" use="required"/>
                    <xsd:attribute name="lowpass" type="xsd:integer" use="required"/>
                    <xsd:attribute name="notchfiltered" type="TYPEflag" use="required"/>
                    <xsd:attribute name="notchfilterfreqs" type="xsd:string" use="optional"/>
                    <xsd:attribute name="artfiltered" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="waveformmodified" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="modifiedby" type="xsd:string" use="optional"/>
                    <xsd:attribute name="upsampled" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="upsamplemethod" type="xsd:string" use="optional"/>
                    <xsd:attribute name="downsampled" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="downsamplemethod" type="xsd:string" use="optional"/>
                    <xsd:attribute name="donotfilter" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="donotanalyze" type="TYPEflag" use="optional"/>
                    <xsd:attribute name="otherinfo" type="xsd:string" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
    </xsd:element>
    <!--leadwaveforms ======================= -->
    <xsd:annotation>
        <xsd:documentation>
```

This is ECG waveform data which is contained in this file, but appears as a set of individual lead elements.

See parsedwaveforms for attribute explanations.
</xsd:documentation>
</xsd:annotation>
<xsd:element name="leadwaveforms">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="leadwaveform" maxOccurs="unbounded"/>
        </xsd:sequence>
        <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
        <xsd:attribute name="compression" type="xsd:string" use="optional"/>
        <xsd:attribute name="numberofleads" type="xsd:positiveInteger" use="required"/>
        <xsd:attribute name="leadlabels" type="TYPElistofleadname" use="required"/>
        <xsd:attribute name="durationperchannel" type="TYPEduration" use="required"/>
        <xsd:attribute name="samplespersecond" type="xsd:float" use="required"/>
        <xsd:attribute name="resolution" type="xsd:float" use="required"/>
        <xsd:attribute name="signaloffset" type="xsd:integer" use="optional"/>
        <xsd:attribute name="signalsigned" type="TYPEflag" use="required"/>
        <xsd:attribute name="bitspersample" type="xsd:positiveInteger" use="required"/>
        <xsd:attribute name="hipass" type="xsd:float" use="required"/>
        <xsd:attribute name="lowpass" type="xsd:integer" use="required"/>
        <xsd:attribute name="notchfiltered" type="TYPEflag" use="required"/>
        <xsd:attribute name="notchfilterfreqs" type="xsd:string" use="optional"/>
        <xsd:attribute name="artfiltered" type="TYPEflag" use="optional"/>
        <xsd:attribute name="waveformmodified" type="TYPEflag" use="optional"/>
        <xsd:attribute name="modifiedby" type="xsd:string" use="optional"/>
        <xsd:attribute name="upsampled" type="TYPEflag" use="optional"/>
        <xsd:attribute name="upsamplemethod" type="xsd:string" use="optional"/>
        <xsd:attribute name="downsampled" type="TYPEflag" use="optional"/>
        <xsd:attribute name="downsamplemethod" type="xsd:string" use="optional"/>
        <xsd:attribute name="donotfilter" type="TYPEflag" use="optional"/>
        <xsd:attribute name="donotanalyze" type="TYPEflag" use="optional"/>
        <xsd:attribute name="otherinfo" type="xsd:string" use="optional"/>
    </xsd:complexType>
</xsd:element>
<xsd:element name="leadwaveform">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:string">
                <xsd:attribute name="leadname" type="TYPEleadname" use="required"/>

```
                    <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
                    <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<!--vector cardiograms - vcgs ========================  -->
<xsd:element name="vcgs">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="vcg" maxOccurs="unbounded"/>
            </xsd:sequence>
            <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
        </xsd:complexType>
</xsd:element>
<xsd:element name="vcg">
        <xsd:complexType>
            <xsd:simpleContent>
                <xsd:extension base="xsd:string">
                    <xsd:attribute name="vcgname" type="TYPEvcgname" use="required"/>
                    <xsd:attribute name="duration" type="TYPEduration" use="required"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:element>
<xsd:simpleType name="TYPEvcgname">
        <xsd:restriction base="xsd:string">
            <xsd:enumeration value="X"/>
            <xsd:enumeration value="Y"/>
            <xsd:enumeration value="Z"/>
        </xsd:restriction>
</xsd:simpleType>
<!--repbeats ========================  -->
<xsd:element name="repbeats">
        <xsd:complexType>
            <xsd:sequence>
                <xsd:element ref="repbeat" maxOccurs="unbounded"/>
                <!-- @compression is present if data is compressed, and describes method (eg., "Huffman")
                    @resolution is in microvolts
                    @repbeatmethod is "mean" for Philips; (another choice is "median" for GE migrated files) -->
            </xsd:sequence>
```

```xml
                    <xsd:attribute name="dataencoding" type="TYPEdataencoding" use="required"/>
                    <xsd:attribute name="compression" type="xsd:string" use="optional"/>
                    <xsd:attribute name="samplespersec" type="xsd:float" use="required"/>
                    <xsd:attribute name="resolution" type="xsd:float" use="required"/>
                    <xsd:attribute name="repbeatmethod" type="xsd:string" use="optional"/>
                </xsd:complexType>
        </xsd:element>
        <xsd:element name="repbeat">
            <xsd:complexType>
                <xsd:sequence>
                    <xsd:element name="pdur" minOccurs="0">
                        <xsd:complexType>
                            <xsd:simpleContent>
                                <xsd:extension base="TYPEduration">
                                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                                </xsd:extension>
                            </xsd:simpleContent>
                        </xsd:complexType>
                    </xsd:element>
                    <xsd:element name="print">
                        <xsd:complexType>
                            <xsd:simpleContent>
                                <xsd:extension base="TYPEduration">
                                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
                                </xsd:extension>
                            </xsd:simpleContent>
                        </xsd:complexType>
                    </xsd:element>
                    <xsd:element name="qonset">
                        <xsd:complexType>
                            <xsd:simpleContent>
                                <xsd:extension base="TYPEfiducial">
                                    <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                                    <xsd:attribute name="uneditedvalue" type="TYPEfiducial" use="optional"/>
                                </xsd:extension>
                            </xsd:simpleContent>
                        </xsd:complexType>
                    </xsd:element>
                    <xsd:element name="qrsdur">
```

```
<xsd:complexType>
    <xsd:simpleContent>
        <xsd:extension base="TYPEduration">
            <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
            <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
        </xsd:extension>
    </xsd:simpleContent>
</xsd:complexType>
</xsd:element>
<xsd:element name="tonset" minOccurs="0">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPEfiducial">
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="uneditedvalue" type="TYPEfiducial" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="qtint">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPEduration">
                <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                <xsd:attribute name="uneditedvalue" type="TYPEduration" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element ref="annotations" minOccurs="0"/>
<xsd:element name="waveform">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="xsd:string">
                <xsd:attribute name="duration" type="TYPEduration" use="required"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
</xsd:sequence>
<xsd:attribute name="leadname" type="TYPEleadname" use="required"/>
```

```xml
                </xsd:complexType>
        </xsd:element>
        <!--  end of repbeats ================================ -->
        <!-- general purpose waveform annotation elements: -->
        <xsd:element name="annotations">
                <xsd:complexType>
                        <xsd:sequence>
                                <xsd:element name="annotation" minOccurs="0" maxOccurs="unbounded">
                                        <xsd:complexType>
                                                <xsd:sequence>
                                                        <!-- name of lead this annot. applies to; if global, omit the leadname -->
                                                        <xsd:element name="leadname" type="TYPEleadname" minOccurs="0"/>
                                                        <!-- the time of the annotation in millisec: -->
                                                        <!--   use edited flag and uneditiedvalue only if the annotation was edited -->
                                                        <xsd:element name="time">
                                                                <xsd:complexType>
                                                                        <xsd:simpleContent>
                                                                                <xsd:extension base="xsd:float">
                                                                                        <xsd:attribute name="editedflag" type="TYPEflag" use="optional"/>
                                                                                        <xsd:attribute name="uneditedvalue" type="xsd:nonNegativeInteger" use="optional"/>
                                                                                </xsd:extension>
                                                                        </xsd:simpleContent>
                                                                </xsd:complexType>
                                                        </xsd:element>
                                                        <!-- the annotation label: -->
                                                        <xsd:element name="label" type="xsd:string"/>
                                                </xsd:sequence>
                                        </xsd:complexType>
                                </xsd:element>
                        </xsd:sequence>
                </xsd:complexType>
        </xsd:element>
        <xsd:simpleType name="TYPEdataencoding">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="Plain"/>
                        <xsd:enumeration value="Base64"/>
                        <xsd:enumeration value="Hex"/>
                </xsd:restriction>
        </xsd:simpleType>
        <!-- end of waveforms ========================================================-->
        <xsd:simpleType name="TYPErestingecgstatus">
```

```xml
<xsd:restriction base="xsd:string">
        <xsd:enumeration value="Not yet determined"/>
        <xsd:enumeration value="New"/>
        <xsd:enumeration value="Await review"/>
        <xsd:enumeration value="Await confirm"/>
        <xsd:enumeration value="Confirmed"/>
        <xsd:enumeration value="Unconfirmed"/>
        <xsd:enumeration value="Archived"/>
        <xsd:enumeration value="Deleted"/>
        <xsd:enumeration value="Other"/>
    </xsd:restriction>
</xsd:simpleType>
<!-- ========================================================================= -->
<xsd:element name="listofECGlead">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPElistofleadname">
                <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="groupofECGlead">
    <xsd:complexType>
        <xsd:simpleContent>
            <xsd:extension base="TYPElistofleadname">
                <xsd:attribute name="changed" type="TYPEflag" use="optional"/>
            </xsd:extension>
        </xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="mdsignatureline" type="xsd:string"/>
<xsd:element name="pamp" type="TYPEamplitude"/>
<xsd:element name="pdur" type="TYPEduration"/>
<xsd:element name="parea" type="TYPEarea"/>
<xsd:element name="ppamp" type="TYPEamplitude"/>
<xsd:element name="ppdur" type="TYPEduration"/>
<xsd:element name="ppppdur" type="TYPEduration"/>
<xsd:element name="pparea" type="TYPEarea"/>
<xsd:element name="pppparea" type="TYPEarea"/>
<xsd:element name="qamp" type="TYPEamplitude"/>
```

```xml
<xsd:element name="qdur" type="TYPEduration"/>
<xsd:element name="ramp" type="TYPEamplitude"/>
<xsd:element name="rdur" type="TYPEduration"/>
<xsd:element name="samp" type="TYPEamplitude"/>
<xsd:element name="sdur" type="TYPEduration"/>
<xsd:element name="rpamp" type="TYPEamplitude"/>
<xsd:element name="rpdur" type="TYPEduration"/>
<xsd:element name="spamp" type="TYPEamplitude"/>
<xsd:element name="spdur" type="TYPEduration"/>
<xsd:element name="vat" type="TYPEstarttime"/>
<xsd:element name="qrsppk" type="TYPEpeaktopeak"/>
<xsd:element name="qrsdur" type="TYPEduration"/>
<xsd:element name="qrsarea" type="TYPEarea"/>
<xsd:element name="ston" type="TYPEamplitude"/>
<xsd:element name="stmid" type="TYPEamplitude"/>
<xsd:element name="st80" type="TYPEamplitude"/>
<xsd:element name="stend" type="TYPEamplitude"/>
<xsd:element name="stdur" type="TYPEduration"/>
<xsd:element name="stslope" type="TYPEstslope"/>
<xsd:element name="stshape" type="TYPEstshape"/>
<xsd:element name="tamp" type="TYPEamplitude"/>
<xsd:element name="tdur" type="TYPEduration"/>
<xsd:element name="tarea" type="TYPEarea"/>
<xsd:element name="tpamp" type="TYPEamplitude"/>
<xsd:element name="tptpdur" type="TYPEduration"/>
<xsd:element name="tpdur" type="TYPEduration"/>
<xsd:element name="tparea" type="TYPEarea"/>
<xsd:element name="tptparea" type="TYPEarea"/>
<xsd:element name="print" type="TYPEduration"/>
<xsd:element name="prseg" type="TYPEduration"/>
<xsd:element name="qtint" type="TYPEduration"/>
<xsd:element name="pacedetectleads" type="TYPElistofleadname"/>
<xsd:element name="pacepulses">
    <xsd:complexType>
        <xsd:sequence>
            <xsd:element ref="pacepulse" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
</xsd:element>
<xsd:element name="pacepulse">
    <xsd:complexType>
```

```
<xsd:simpleContent>
    <xsd:extension base="TYPEnull">
        <xsd:attribute name="starttime" type="TYPEstarttime" use="required"/>
        <xsd:attribute name="duration" type="TYPEduration" use="optional"/>
        <xsd:attribute name="upswingamp" type="xsd:nonNegativeInteger" use="optional"/>
        <xsd:attribute name="downswingamp" type="xsd:nonNegativeInteger" use="optional"/>
        <xsd:attribute name="paceamptype" type="TYPEpaceamptype" use="optional"/>
    </xsd:extension>
</xsd:simpleContent>
    </xsd:complexType>
</xsd:element>
<xsd:element name="pacemode" type="TYPEintegerORnull"/>
<xsd:element name="pacemalf" type="TYPEintegerORnull"/>
<xsd:element name="pacemisc" type="TYPEintegerORnull"/>
<xsd:element name="ectopicrhythm" type="TYPEintegerORnull"/>
<xsd:element name="qtintdispersion" type="TYPEduration"/>
<xsd:element name="numberofcomplexes" type="TYPEcount"/>
<xsd:element name="numberofgroups" type="TYPEcount"/>
<xsd:element name="beatclassification" type="TYPElistofgroupnumber"/>
<xsd:simpleType name="TYPElistofgroupnumber">
    <xsd:list itemType="TYPEgroupnumber"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEgroupnumber">
    <xsd:restriction base="xsd:nonNegativeInteger">
        <xsd:maxInclusive value="50"/>
        <xsd:minInclusive value="0"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:element name="pfrontaxis" type="TYPEaxis"/>
<xsd:element name="phorizaxis" type="TYPEaxis"/>
<xsd:element name="i40frontaxis" type="TYPEaxis"/>
<xsd:element name="i40horizaxis" type="TYPEaxis"/>
<xsd:element name="qrsfrontaxis" type="TYPEaxis"/>
<xsd:element name="qrshorizaxis" type="TYPEaxis"/>
<xsd:element name="t40frontaxis" type="TYPEaxis"/>
<xsd:element name="t40horizaxis" type="TYPEaxis"/>
<xsd:element name="stfrontaxis" type="TYPEaxis"/>
<xsd:element name="sthorizaxis" type="TYPEaxis"/>
<xsd:element name="tfrontaxis" type="TYPEaxis"/>
<xsd:element name="thorizaxis" type="TYPEaxis"/>
<xsd:element name="atrialrate" type="TYPErate"/>
```

```xml
<xsd:element name="heartrate" type="TYPErate"/>
<xsd:element name="lowventrate" type="TYPErate"/>
<xsd:element name="meanventrate" type="TYPErate"/>
<xsd:element name="highventrate" type="TYPErate"/>
<xsd:element name="meanprint" type="TYPEduration"/>
<xsd:element name="meanprseg" type="TYPEduration"/>
<xsd:element name="meanqrsdur" type="TYPEduration"/>
<xsd:element name="meanqtint" type="TYPEduration"/>
<xsd:element name="meanqtc" type="TYPEduration"/>
<xsd:element name="deltawavecount" type="TYPEcount"/>
<xsd:element name="deltawavepercent" type="TYPEpercent"/>
<xsd:element name="bigeminycount" type="TYPEcount"/>
<xsd:element name="bigeminystring" type="TYPEcount"/>
<xsd:element name="trigeminycount" type="TYPEcount"/>
<xsd:element name="trigeminystring" type="TYPEcount"/>
<xsd:element name="wenckcount" type="TYPEcount"/>
<xsd:element name="wenckstring" type="TYPEcount"/>
<xsd:element name="flutterfibcount" type="TYPEcount"/>
<xsd:element name="membercount" type="TYPEcount"/>
<xsd:element name="memberpercent" type="TYPEpercent"/>
<xsd:element name="longestrun" type="TYPEcount"/>
<xsd:element name="ventratestddev" type="TYPErate"/>
<xsd:element name="meanrrint" type="TYPEduration"/>
<xsd:element name="atrialratestddev" type="TYPErate"/>
<xsd:element name="avgpcount" type="TYPEcount"/>
<xsd:element name="notavgpbeats" type="TYPEcount"/>
<xsd:element name="lowprint" type="TYPEduration"/>
<xsd:element name="highprint" type="TYPEduration"/>
<xsd:element name="printstddev" type="TYPEduration"/>
<xsd:element name="meanqtseg" type="TYPEduration"/>
<xsd:element name="comppausecount" type="TYPEcount"/>
<!-- ========================================================================= -->
<!-- Types: -->
<xsd:simpleType name="TYPEnull">
    <xsd:restriction base="xsd:string">
        <xsd:whiteSpace value="collapse"/>
        <xsd:enumeration value=""/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEdate">
    <xsd:union memberTypes="TYPEnull xsd:date"/>
```

```xml
        </xsd:simpleType>
        <xsd:simpleType name="TYPEtime">
                <xsd:union memberTypes="TYPEnull xsd:time"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEinvalidPlus">
                <xsd:restriction base="xsd:string">
                        <xsd:whiteSpace value="collapse"/>
                        <xsd:enumeration value=""/>
                        <xsd:enumeration value="Indeterminate"/>
                        <xsd:enumeration value="Invalid"/>
                        <xsd:enumeration value="Failed"/>
                        <xsd:enumeration value="Unknown"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEflag">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="True"/>
                        <xsd:enumeration value="False"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEnotch">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="None"/>
                        <xsd:enumeration value="Positive"/>
                        <xsd:enumeration value="Negative"/>
                        <xsd:enumeration value="Both positive and negative"/>
                        <xsd:enumeration value="Unknown"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEflagUnk">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="Unknown"/>
                        <xsd:enumeration value="True"/>
                        <xsd:enumeration value="False"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEpacestatus">
                <xsd:restriction base="xsd:string">
                        <xsd:enumeration value="Paced"/>
                        <xsd:enumeration value="Non paced"/>
                        <xsd:enumeration value="Paced with magnet"/>
```

```xml
            <xsd:enumeration value="Unknown"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEinteger">
        <xsd:union memberTypes="xsd:integer TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEintegerORnull">
        <xsd:union memberTypes="TYPEnull xsd:integer"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEamplitude2">
        <xsd:restriction base="xsd:integer">
            <xsd:maxInclusive value="10000"/>
            <xsd:minInclusive value="-10000"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEamplitude">
        <xsd:union memberTypes="TYPEamplitude2 TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEpeaktopeak2">
        <xsd:restriction base="xsd:integer">
            <xsd:maxInclusive value="20000"/>
            <xsd:minInclusive value="0"/>
        </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEpeaktopeak">
        <xsd:union memberTypes="TYPEpeaktopeak2 TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEstarttime">
        <xsd:union memberTypes="xsd:nonNegativeInteger TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEduration">
        <xsd:union memberTypes="xsd:nonNegativeInteger TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEfiducial">
        <xsd:union memberTypes="xsd:nonNegativeInteger TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEarea2">
        <xsd:restriction base="xsd:integer">
            <xsd:maxInclusive value="20000"/>
            <xsd:minInclusive value="-20000"/>
        </xsd:restriction>
```

```xml
        </xsd:simpleType>
        <xsd:simpleType name="TYPEarea">
                <xsd:union memberTypes="TYPEarea2 TYPEinvalidPlus"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEcount">
                <xsd:union memberTypes="xsd:nonNegativeInteger TYPEinvalidPlus"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEpercent2">
                <xsd:restriction base="xsd:nonNegativeInteger">
                        <xsd:maxInclusive value="100"/>
                        <xsd:minInclusive value="0"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEpercent">
                <xsd:union memberTypes="TYPEpercent2 TYPEinvalidPlus"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPErate2">
                <xsd:restriction base="xsd:nonNegativeInteger">
                        <xsd:maxInclusive value="1200"/>
                        <xsd:minInclusive value="0"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPErate">
                <xsd:union memberTypes="TYPErate2 TYPEinvalidPlus"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEaxis2">
                <xsd:restriction base="xsd:integer">
                        <xsd:maxInclusive value="360"/>
                        <xsd:minInclusive value="-360"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEaxis">
                <xsd:union memberTypes="TYPEaxis2 TYPEinvalidPlus"/>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEstslope2">
                <xsd:restriction base="xsd:integer">
                        <xsd:maxInclusive value="90"/>
                        <xsd:minInclusive value="-90"/>
                </xsd:restriction>
        </xsd:simpleType>
        <xsd:simpleType name="TYPEstslope">
```

```xml
            <xsd:union memberTypes="TYPEstslope2 TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEbp">
            <xsd:union memberTypes="xsd:float TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEheight">
            <xsd:union memberTypes="xsd:float TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEweight">
            <xsd:union memberTypes="xsd:float TYPEinvalidPlus"/>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEstshape">
            <xsd:restriction base="xsd:string">
                    <xsd:enumeration value="Straight"/>
                    <xsd:enumeration value="Convex"/>
                    <xsd:enumeration value="Concave"/>
                    <xsd:enumeration value="Unknown"/>
            </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEnoiselevel">
            <xsd:restriction base="xsd:string">
                    <xsd:enumeration value="None"/>
                    <xsd:enumeration value="Light"/>
                    <xsd:enumeration value="Marked"/>
                    <xsd:enumeration value="Severe"/>
            </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEnoise">
            <xsd:restriction base="xsd:string">
                    <xsd:enumeration value="Baseline artifacts"/>
                    <xsd:enumeration value="AC artifacts"/>
                    <xsd:enumeration value="Muscle artifacts"/>
            </xsd:restriction>
    </xsd:simpleType>
    <xsd:simpleType name="TYPEleadname">
            <xsd:restriction base="xsd:string">
                    <xsd:enumeration value="I"/>
                    <xsd:enumeration value="II"/>
                    <xsd:enumeration value="III"/>
                    <xsd:enumeration value="aVR"/>
                    <xsd:enumeration value="-aVR"/>
```

```
<xsd:enumeration value="aVL"/>
<xsd:enumeration value="aVF"/>
<xsd:enumeration value="V1"/>
<xsd:enumeration value="V2"/>
<xsd:enumeration value="V3"/>
<xsd:enumeration value="V4"/>
<xsd:enumeration value="V5"/>
<xsd:enumeration value="V6"/>
<xsd:enumeration value="V7"/>
<xsd:enumeration value="V8"/>
<xsd:enumeration value="V9"/>
<xsd:enumeration value="V2R"/>
<xsd:enumeration value="V3R"/>
<xsd:enumeration value="V4R"/>
<xsd:enumeration value="V5R"/>
<xsd:enumeration value="V6R"/>
<xsd:enumeration value="V7R"/>
<xsd:enumeration value="V8R"/>
<xsd:enumeration value="V9R"/>
<xsd:enumeration value="C1"/>
<xsd:enumeration value="C2"/>
<xsd:enumeration value="C3"/>
<xsd:enumeration value="C4"/>
<xsd:enumeration value="C5"/>
<xsd:enumeration value="C6"/>
<xsd:enumeration value="C7"/>
<xsd:enumeration value="C8"/>
<xsd:enumeration value="C9"/>
<xsd:enumeration value="C2R"/>
<xsd:enumeration value="C3R"/>
<xsd:enumeration value="C4R"/>
<xsd:enumeration value="C5R"/>
<xsd:enumeration value="C6R"/>
<xsd:enumeration value="C7R"/>
<xsd:enumeration value="C8R"/>
<xsd:enumeration value="C9R"/>
<xsd:enumeration value="CX1"/>
<xsd:enumeration value="CX2"/>
<xsd:enumeration value="CX3"/>
<xsd:enumeration value="CX4"/>
<xsd:enumeration value="Id"/>
```

```
<xsd:enumeration value="IId"/>
<xsd:enumeration value="IIId"/>
<xsd:enumeration value="aVRd"/>
<xsd:enumeration value="-aVRd"/>
<xsd:enumeration value="aVLd"/>
<xsd:enumeration value="aVFd"/>
<xsd:enumeration value="V1d"/>
<xsd:enumeration value="V2d"/>
<xsd:enumeration value="V3d"/>
<xsd:enumeration value="V4d"/>
<xsd:enumeration value="V5d"/>
<xsd:enumeration value="V6d"/>
<xsd:enumeration value="V7d"/>
<xsd:enumeration value="V8d"/>
<xsd:enumeration value="V9d"/>
<xsd:enumeration value="V2Rd"/>
<xsd:enumeration value="V3Rd"/>
<xsd:enumeration value="V4Rd"/>
<xsd:enumeration value="V5Rd"/>
<xsd:enumeration value="V6Rd"/>
<xsd:enumeration value="V7Rd"/>
<xsd:enumeration value="V8Rd"/>
<xsd:enumeration value="V9Rd"/>
<xsd:enumeration value="X"/>
<xsd:enumeration value="Y"/>
<xsd:enumeration value="Z"/>
<xsd:enumeration value="Xd"/>
<xsd:enumeration value="Yd"/>
<xsd:enumeration value="Zd"/>
<xsd:enumeration value="VX1"/>
<xsd:enumeration value="VX2"/>
<xsd:enumeration value="VX3"/>
<xsd:enumeration value="VX4"/>
<xsd:enumeration value="A1"/>
<xsd:enumeration value="A2"/>
<xsd:enumeration value="A3"/>
<xsd:enumeration value="A4"/>
<xsd:enumeration value="USER1"/>
<xsd:enumeration value="USER2"/>
<xsd:enumeration value="USER3"/>
<xsd:enumeration value="CC5"/>
```

```
<xsd:enumeration value="CM5"/>
<xsd:enumeration value="CH"/>
<xsd:enumeration value="ML"/>
<xsd:enumeration value="LA"/>
<xsd:enumeration value="RA"/>
<xsd:enumeration value="LL"/>
<xsd:enumeration value="i"/>
<xsd:enumeration value="E"/>
<xsd:enumeration value="C"/>
<xsd:enumeration value="A"/>
<xsd:enumeration value="M"/>
<xsd:enumeration value="F"/>
<xsd:enumeration value="H"/>
<xsd:enumeration value="MaVR"/>
<xsd:enumeration value="MVR"/>
<xsd:enumeration value="S"/>
<xsd:enumeration value="AS"/>
<xsd:enumeration value="ES"/>
<xsd:enumeration value="IS"/>
<xsd:enumeration value="V"/>
<xsd:enumeration value="VM"/>
<xsd:enumeration value="MZ"/>
<xsd:enumeration value="MY"/>
<xsd:enumeration value="NEHB_D"/>
<xsd:enumeration value="NEHB_A"/>
<xsd:enumeration value="NEHB_J"/>
<xsd:enumeration value="BP_X"/>
<xsd:enumeration value="BP_Y"/>
<xsd:enumeration value="BP_Z"/>
<xsd:enumeration value="ECG"/>
<xsd:enumeration value="MCL"/>
<xsd:enumeration value="MCL1"/>
<xsd:enumeration value="PADS"/>
<xsd:enumeration value="PADDLES"/>
<xsd:enumeration value="PACE"/>
<xsd:enumeration value="RESP"/>
<xsd:enumeration value="RESP-Imp"/>
<xsd:enumeration value="RESP-ECG-derived"/>
<xsd:enumeration value="RESP-ECG-derived-I"/>
<xsd:enumeration value="RESP-ECG-derived-II"/>
<xsd:enumeration value="RESP-ECG-derived-III"/>
```

```xml
        <xsd:enumeration value="RESP-ECG-derived-aVR"/>
        <xsd:enumeration value="RESP-ECG-derived-aVL"/>
        <xsd:enumeration value="RESP-ECG-derived-aVF"/>
        <xsd:enumeration value="RESP-ECG-derived-V1"/>
        <xsd:enumeration value="RESP-ECG-derived-V2"/>
        <xsd:enumeration value="RESP-ECG-derived-V3"/>
        <xsd:enumeration value="RESP-ECG-derived-V4"/>
        <xsd:enumeration value="RESP-ECG-derived-V5"/>
        <xsd:enumeration value="RESP-ECG-derived-V6"/>
        <xsd:enumeration value="PLETH"/>
        <xsd:enumeration value="?"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPElistofleadname">
    <xsd:list itemType="TYPEleadname"/>
</xsd:simpleType>
<xsd:simpleType name="TYPEpaceamptype">
    <xsd:restriction base="xsd:string">
        <xsd:enumeration value="Up swing first"/>
        <xsd:enumeration value="Down swing first"/>
        <xsd:enumeration value="Positive"/>
        <xsd:enumeration value="Negative"/>
        <xsd:enumeration value="Biphasic"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEstringMax32">
    <xsd:restriction base="xsd:string">
        <xsd:maxLength value="32"/>
    </xsd:restriction>
</xsd:simpleType>
<xsd:simpleType name="TYPEstringMax64">
    <xsd:restriction base="xsd:string">
        <xsd:maxLength value="64"/>
    </xsd:restriction>
</xsd:simpleType>
<!-- All "people" are represented with one of these two types;
        the element hold the person's name if known, else the null string ""
        @the id attribute holds the person's ID (eg., logname or UPIN): -->
<xsd:complexType name="TYPEperson">
    <xsd:simpleContent>
        <xsd:extension base="TYPEstringMax32">
```

```xml
                    <xsd:attribute name="id" type="TYPEstringMax64" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
        <!-- Person with additional date and time attribute, representing
            time that an action was performed (eg., edit or confirmation);
                    the element hold the person's name if known, else the null string ""
                    @date of the last "action"
                    @time of the last "action"
                    @the id attribute holds the person's ID (eg., logname or UPIN) -->
        <xsd:complexType name="TYPEpersonwithdatetime">
            <xsd:simpleContent>
                <xsd:extension base="TYPEstringMax32">
                    <xsd:attribute name="date" type="TYPEdate" use="optional"/>
                    <xsd:attribute name="time" type="TYPEtime" use="optional"/>
                    <xsd:attribute name="id" type="TYPEstringMax64" use="optional"/>
                </xsd:extension>
            </xsd:simpleContent>
        </xsd:complexType>
</xsd:schema>
```

1.03 TO 1.04 SCHEMA MAPPING

Philips XML ECG schema version 1.04 (June 27, 2005), changes from schema version 1.03.

NOTE: RED fields are modifications made after the March 1, 2005 version was released

NOTE: Purple fields are modifications made after the March 28, 2005 version was released

Field	Change
Filename (SierraECG.xsd & SierraECGExtendedType.xsd)	Now "PhilipsECG.xsd" & "PhilipsECGExtendedType.xsd" The term "Sierra" should not be used externally.
RESTING ECG DATA/	
restingecgdata/otherECGs	New section to hold links to previous and subsequent ECGs (see "OTHER ECGS" below). Optional. NOTE: The contents of this section are dynamic, that is, they will be different as new ECGs are taken.
restingecgdata/reportinfo	Required; no change
DOCUMENT INFO/	
../documentinfo/documentname	Always exactly 40 characters. Should be of the form "*GUID.xml*" using 36 character GUID (no change from 1.03). NOTE: This does not always need to match the filename.
../documentinfo/filename	optional string filename element (no length restrictions)
../documentinfo/documenttype	Now "PhilipsECG" (was "SierraECG")
../documentinfo/documentversion	Now "1.04"
../editor	New optional element to describe the person who last edited the ECG demographics, measurements, and/or interpretations. This element contains the person's name, if known.
../editor@date	Date the ECG was last edited. Optional.
../editor@time	Time the ECG was last edited. Optional.
../editor@id	This attribute contains the person's ID, for example, logname or UPIN. Optional. Moved here from ../*dataacquisition/acquirer*, and renamed from *editingoperatorid*.

DOCUMENT INFO/	
../documentinfo/comments	New optional element., String for comments. Number is unbounded.
USER DEFINES (User configurable fields)	
../userdefines/userdefine	Maximum number of userdefine elements is now unbounded (was 8).
../userdefines/userdefine@index	Each user define now has a new required attribute that contains the index number of this user define (that is, "1", "2", "3").
ORDER INFORMATION	
../orderinfo/encounterid	Deleted (duplicate to *../dataacquisition/acquirer/encounterid*)
../orderinfo/operatorid	Deleted (duplicate to *dataacquisition/acquirer/operatorid*)
../orderinfo/orderingclinicianname	Deleted (duplicate to *dataacquisition/acquirer/orderingclinician*)
../orderinfo/orderingclinicianUPIN	Deleted (duplicate to *dataacquisition/acquirer/orderingclinician*)
../orderinfo/orderbillingcode	New optional element
../orderinfo/orderremarks	New optional element
../orderinfo/reasonfororder	Now optional
../orderinfo/drgcategories	Now optional
../orderinfo@datesubmitted	Renamed to "*orderrequestdate*" to be consistent with the Orders schema
../orderinfo@timesubmitted	Renamed to "*orderrequesttime*" to be consistent with the Orders schema
../orderinfo/viperuniqueorderid	Renamed to *uniqueorderid*
../orderinfo/orderstatus	New string. Optional.
../orderinfo/inbox	New string. Optional. This is the LogicalDept association.
../orderinfo/other	New. Optional elements for future use, if needed. Each node has a "label" attribute.

OTHER ECGS (new)	
restingecgdata/otherECGs/otherECG	New element to hold information about a previous/subsequent ECG. Optional. The number of these is unbounded.
../otherECG/type	New enumerated element, either "previous" or "subsequent". Required.
../otherECG/documentname	New element. Required.
../otherECG/severity	New element. Required.
../otherECG/mdsignatureline	New element. Required.
../otherECG/other	New string element for future use. Optional.
../otherECG@date	Date of other ECG
../otherECG@time	Time of other ECG
../otherECG@status	Status of other ECG
REPORT INFORMATION	
restingecgdata/reportinfo/savedreportinfo	This new element contains a complete copy of a previous *reportinfo* section. The number of these is unbounded. Optional.
restingecgdata/reportinfo/savedreportinfo@original	This new flag attribute is set to "*True*" if the saved report setting is the "original" report setting. Optional.
restingecgdata/reportinfo/savedreportinfo@other	New string attribute for future use (for example, description of this saved report info). Optional.
../reportinfo/reporttype	Renamed to "*reportlabel*". This label SHOULD appear on the report; or at least it should appear if other than "*STD 12 LEAD*".
../reportinfo/reportdescription	Enumerated list now changed to string (for future flexibility). If *reportlabel* is "*Other*", this description should be used.
../reportinfo/reportformat/waveformformat/mainwaveformformat@nrow	Now positive integer no longer limited to 12.
../reportinfo/reportformat/waveformformat/mainwaveformformat@ncol	Now positive integer no longer limited to 12.
../reportinfo/reportformat/waveformformat/mainwaveformformat@repbeat	New attribute. Set to "*True*" if representative beat should be displayed for each lead. NOTE: Should be "*True*" for the "*PAN-12*" report format. Optional.
../reportformat/waveformformat/rhythmwaveformformat@nrhythm	Now positive integer no longer limited to 3.

REPORT INFORMATION	
../reportformat@extendedmeasflag	Now optional. "*False*" if not present.
../reportformat@printtruncationflag	Now optional. "*False*" if not present.
../reportinfo/reportbandwidth/highpassfiltersetting	Changed from enumerated list to "float" to be consistent with data acquisition and waveform filter setting types.
../reportinfo/reportbandwidth/lowpassfiltersetting	Changed from enumerated list to "positiveInteger" to be consistent with data acquisition and waveform filter setting types.
../reportinfo/reportbandwidth/notchfiltersetting	Added "*50 60*" to the enumeration list.
../reportinfo/reportbandwidth/hysterisisfiltersflag	Renamed to "*hysteresisfilterflag*" (spelling error; no longer plural).
DATA ACQUISITION	
../dataacquisition/emsdatabaseid	Renamed to "*databaseid*" for consistency.
../dataacquisition/modality	New acquisition modality, for example., *RESTING*, *EXERCIS*. Optional.
../dataacquisition@statflag	Now optional. Assume "*False*" if not present.
../dataacquisition/acquirer/operator	New element. Contains the operator's name. Optional.
../dataacquisition/acquirer/operator@id	Now optional. Renamed from "*operatorid*".
../dataacquisition/acquirer/editingoperatorid	Deleted (moved to *interpretation* section)
../dataacquisition/acquirer/institutionlocationid	Renamed to "*facilityid*" (to be consistent with all displays).
../dataacquisition/acquirer/institutionlocationname	Renamed to "*facilityname*".
../dataacquisition/acquirer/reviewingclinician	Deleted (moved to *interpretation* section as *confirmingclinician*)
../dataacquisition/acquirer/orderingclinician	New. Person's name. Optional.
../dataacquisition/acquirer/orderingclinician@id	New. Person's ID. Optional.
../dataacquisition/acquirer/orderingclinicianname	Renamed to "*orderingclinician*" to be consistent.
../dataacquisition/acquirer/orderingclinicianUPIN	Renamed to "*orderingclinician@id*" to be consistent.

DATA ACQUISITION	
../dataacquisition/acquirer/fellow	New element (for possible future use). Optional.
../dataacquisition/acquirer/fellow@id	New element (for possible future use). Optional.
../dataacquisition/acquirer/attending	New element (for possible future use). Optional.
../dataacquisition/acquirer/attending@id	New element (for possible future use). Optional.
../dataacquisition/acquirer/referringclinician	New element (for future use). Optional.
../dataacquisition/acquirer/referringclinician@id	New element (for future use). Optional.
../dataacquisition/acquirer/consultingclinician	New element (for future use). Optional.
../dataacquisition/acquirer/consultingclinician@id	New element (for future use). Optional.
../dataacquisition/acquirer/bed	New element. Optional.
../dataacquisition/signalcharacteristics/	Device implementers should review the comments in this section carefully!
../dataacquisition/signalcharacteristics/signalresolution	Renamed "*resolution*".
../dataacquisition/signalcharacteristics/signalbandwidth	Deleted
../dataacquisition/signalcharacteristics/hipass	New element (float). For example, 0.05. (Was enumeration.)
../dataacquisition/signalcharacteristics/lowpass	New element (integer). For example, 150. (Was enumeration.)
../dataacquisition/signalcharacteristics/otheracquisitioninfo	New string element (for future use or if acquisitiontype is "*Other*"). Optional.
../dataacquisition/signalcharacteristics/electrodeplacement	New enumuration of electrode placements (for example, STD-12 or Mason-Likar, and so on)
../dataacquisition/signalcharacteristics/otherplacementinfo	New string element to describe electrode placement if *electrodeplacement* is "*Other*". Optional.
../dataacquisition/signalcharacteristics/leadset	Deleted (replaced with "*electrodeplacement*").
../dataacquisition/signalcharacteristics/derivedleads	New list of leadnames if any leads are derived (for examlpe, EASI to STD or 6-wire to 12 leads) during *dataacquisition*. Optional.
../dataacquisition/signalcharacteristics/signaloffset	Changed type from "string" to "integer".

PATIENT	
../patient@criteriaversionforpatientdata	Left alone -- no change
../patient@customcriteriaversion	New attribute fo use if criteriaversionforpatientdata is "Custom". Optional.
../patient@othercriteriaversion	New (string) attribute for use if criteriaversionforpatientdata is set to "Other". Optional.
../patient/generalpatientdata/viperuniquepatientid	Renamed to"*uniquepatientid*". The term "Viper" should not be used externally.
../patient/generalpatientdata/MRN	New string element: Medical Record Number. May be used in addition to *patientid*. Optional.
../patient/generalpatientdata/secondaryid	New string element. May be used in addition to *patientid*. Optional.
restingecgdata/measurements	Renamed to "*internalmeasurements*" to highlight that these are algorithm internal measurements.

Global Measurements (Now Cross Lead Measurements)	
../internalmeasurements/globalmeasurements	Renamed to "*crossleadmeasurements*" to highlight that these are algorithm internal measurements, not global for external use. Now optional.
../internalmeasurements/crossleadmeasurements@attributes	All attributes are now optional: *fixedmultpflag*, *multptestvalid*, *qrslikeartifact*, *pacedbeatmeasflag*
../internalmeasurements/crossleadmeasurements/*	All elements now optional.
../internalmeasurements/crossleadmeasurements/*	Added new measurements for next revision of the Philips 12-Lead algorithm (Pyramid). They are added here as optional. Not all are listed here. leadreversalcode rhythm codes frequency values pwaveshape pre excitation code vector loop measurements
../crossleadmeasurements/pon	Deleted. Legacy single beat; rep beats should be used instead.
../crossleadmeasurements/qrson	Deleted. Legacy single beat; rep beats should be used instead.
../crossleadmeasurements/qrsoff	Deleted. Legacy single beat; rep beats should be used instead.
../crossleadmeasurements/ton	Deleted. Legacy single beat; rep beats should be used instead.
../crossleadmeasurements/toff	Deleted. Legacy single beat; rep beats should be used instead.

Global Measurements (Now Cross Lead Measurements)	
qrsinitangle	Removed. Replaced with transverse plane vector loop measurements.
qrsinitmag	Removed. Replaced with transverse plane vector loop measurements.
qrsmaxangle	Removed. Replaced with transverse plane vector loop measurements.
qrsmaxmag	Removed. Replaced with transverse plane vector loop measurements.
qrstermangle	Removed. Replaced with transverse plane vector loop measurements.
qrstermmag	Removed. Replaced with transverse plane vector loop measurements.
qrsrotation	Removed. Replaced with transverse plane vector loop measurements.
../pacemodes	Deleted. Only one *pacemode* allowed.
../pacemode	Now union(integer null) (These were all long enumeration strings.) Optional.
../pacemalf	Now union(integer null) (These were all long enumeration strings.) Optional.
../pacemisc	Now union(integer null) (These were all long enumeration strings.) Optional.
../ectopicrhythm	Now union(integer null) (These were all long enumeration strings.) Optional.
../crossleadmeasurements/beats	New element to describe global beat locations. Optional.
../crossleadmeasurements/namedmeasurement	Added *namedmeasurement* for future use
../globalmeasurement/globalreserved	Deleted (replaced with *namedmeasurement*)
../internalmeasurements/configsettings	New section to hold configuration settings that are needed if the ECG is re-interpreted by running through the diagnostic algorithm. Optional.
../configsettings/bradyhrlimit	New integer value to hold the bradycardia heart rate limit (for example, 50, or 60).
../configsettings/asianlvhcriteria	New flag set "*True*" if Asian LVH criteria is to be used. Optional.
../configsettings/qualitystmts	New integer value to hold the quality statements printing control value.
../configsettings/sensitivity	New integer to hold the overall sensitivity control value. Optional.

Global Measurements (now Cross Lead Measurements)	
../configsettings/configsetting	New and unbounded element to hold a config "*name*" and "*value*" elements for future use. Optional.
Group Measurements	
../internalmeasurements/groupmeasurements	Now optional.
/groupmeasurements/groupmeasurement	Now optional.
groupmeasurement.elements	All elements optional except *membercount*.
groupmeasurement.elements/namedmeasurement	New element to hold new measurements in the future. Each named measurement has a name and value. Optional.
../internalmeasurements/groupmeasurements@attributes	All attributes now optional: *interpflag*, *sinusflag*, …, *ventdualpaceflag*.
../internalmeasurements/groupmeasurements/namedmeasurement	New element to hold new measurements in the future. Optional.
../internalmeasurements/groupmeasurements/groupreserved	Deleted (replaced with *namedmeasurement*).
Lead Measurements	
../internalmeasurements/leadmeasurements	Now optional
../internalmeasurements/leadmeasurements/leadmeasurement	Optional
../leadmeasurements/leadmeasurement@ all attributes except leadname	Optional
../leadmeasurement	All elements optional
../leadmeasurement/beats	New element to describe beat locations on each lead. Optional.
../leadmeasurement/namedmeasurement	New element to hold new measurements in the future.
INTERPRETATIONS	
../interpretationdatastructure	Now optional
../mdsignatureline	Now optional
../confirmingclinician	New element to describe the person who confirms the ECG, or on whose behalf the ECG is confirmed. This element contains the person's name, if known. Optional.

INTERPRETATIONS	
../confirmingclinician@date	Date the ECG was confirmed.
../confirmingclinicianr@time	Time the ECG was confirmed.
../confirmingclinician@id	New attribute to describe the person who confirms the ECG, or on whose behalf the ECG is confirmed. This attribute contains the person's ID, for example, *logname* or *UPIN*. Optional.
../severity	Now optional
../severity@code	Now optional
../statement	Now optional
../interpretations/interpretation@criteriaversiondate	Now optional
../interpretations/interpretation@customcriteriaversion	Now optional. In *PhilipsECGExtended.xsd*, length not required to be 32 chars, can be shorter.
../interpretations/interpretation@othercriteriaversion	New string attribute for use if *criteriaversion* is set to "*Other*". optional
interpretation statement varibale now has *edited* flag	
../intrerpretationdatastruct/codedstatement/modifiers/modifier@changed	New element (flag). Optional.
TYPEstatementsource	Now includes enumeration value "*Migration*".
Interpretation Measurements (now Global Measurements)	There has been confusion between the global measurements and interpretation measurements. To fix this, the global measurement section has been renamed "*../internalmeasurements/crossleadmeasurements*". Global measures in the *interpretationmeasurement* section are now renamed to be "*globalmeasurements*".
../interpretationmeasurements/	Renamed to *globalmeasurements* and now optional
../globalmeasurements/ all elements	All elements now have "*edited*" and "*uneditedvalue*" attributes.
../globalmeasurements/heartrate	No change.
../globalmeasurements/rrint	New. R-R interval computed from heartrate.
../globalmeasurements/atrialrate	New. Optional. Atrial rate.
../globalmeasurements/pdur	New. Optional.

Interpretation Measurements (now Global Measurements)	
../globalmeasurements/print	Renamed from *meanprint* (it is not a "mean").
../globalmeasurements/qonset	New. Now *TYPEInvalidPlus.*
../globalmeasurements/qrsdur	Renamed from *meanqrsdur* (it is not a "mean").
../globalmeasurements/tonset	New. Optional. Now typeInvalidPlus.
../globalmeasurements/qtint	Renamed from *meanqtint* (it is not a "mean").
../globalmeasurements/qtcb	Renamed from *meanqtc* (it is not a mean). Uses Bazett correction.
../globalmeasurements/qtcf	New. Fredericia corrected QT (needed for Pharma). Optional.
../globalmeasurements/qtco	New. "*QTc Other*". The number of these is unbounded. Optional.
../globalmeasurements/qtco@label	New. Required. "QTc Other" correction display label, for example, "QTch" for Hodges
../globalmeasurements/qtco@methodname	New. Required. "*QTc Other*" method description, for example, "Hodges".
../globalmeasurements/toffsetstabilityrank	New. Ranked list of lead labels corresponding to ranking of T wave offset stability. Used to calculate QT interval. Lead names are separated by spaces. Most stable lead comes first. Optional.
../globalmeasurements/ axis measurements	All axis measurements. Note that *pfrontaxis*, *qrsfrontaxis*, *tfrontaxis* are now optional.
../globalmeasurements@arrhyflag	Deleted
../globalmeasurements@editedflag	Now optional. Assume not edited if not present.
WAVEFORMS	Waveform sample data
PARSEDWAVEFORMS	
../parsedwaveforms@compressflag	Removed (replaced with "*compression*").
../parsedwaveforms@compressmethod	removed (replaced with "*compression*").
../parsedwaveforms@compression	New string element. If not present, no compression. If present, will contain name of compression method, for example, "*XLI*". Optional.
../parsedwaveforms@numberofleads	New positive integer element to describe number of leads in waveform blob. Required.

PARSEDWAVEFORMS	
../parsedwaveforms@leadlabels	New list element containing a list of lead labels. Required.
../parsedwaveforms@samplespersecond	New float element to describe sample rate. Required.
../parsedwaveforms@resolution	New data resolution value. Value in *uV*. Required.
../parsedwaveforms@signaloffset	New signal offset value to be subtracted from each sample point. If not present, assume 0. Optional.
../parsedwaveforms@signalsigned	New flag. True if data samples are signed values. Required.
../waveforms/parsedwaveforms@bitspersample	Changed from type enumeration to nonNegativeInteger to allow more flexibility. Note that the name is "*bitspersample*", not "*nbitspersample*", to be consistent with dataacquisition section.
../parsedwaveforms@hipass	New high pass filtered value (float). Value in Hz (for example, 0.5). Required.
../parsedwaveforms@lowpass	New low pass filtered value (nonNegativeInteger). Value in Hz (for example., 100). Required.
../parsedwaveforms@notchfiltered	New flag. Set to *True* if data has been powerline notch filtered. Required.
../parsedwaveforms@notchfilterfreqs	New list of notch filter frequencies; for example, "60", or ""60 120 180". Optional.
../parsedwaveforms@artfiltered	New flag. Set to *True* if data has been filtered by the special artifact filter since data acquisition. Optional.
../parsedwaveforms@waveformmodified	New flag (boolean) element. If not present, assume *False*. If present, the waveform here has been modified since data acquisition. Description of the new characteristics is described with the attributes in this section. Optional.
../parsedwaveforms@modifiedby	New description of device that modified the waveforms since data acquisition;for example, "*TraceMasterVue*". Optional.
../parsedwaveforms@upsampled	New flag. Set to *True* if data has been upsampled since data acquisition. Optional.
../parsedwaveforms@upsamplemethod	New string. Describes upsampling method (for example, "linear interpolation"). Optional.
../parsedwaveforms@downsampled	New flag. Set to *True* if data has been downsampled since data acquisition. NOTE: It is possible to have both upsampled and downsampled set "*True*", for example, 250sps data is upsampled to 500, then subsequently downsampled to 250, or 500sps is downsampled to 250 then upsampled to 500. Optional.
../parsedwaveforms@downsamplemethod	New string. Describes down sampling method (for example, "low pass filtered"). Optional.
../parsedwaveforms@filterflag	Renamed to "*donotfilter*". If set to *True*, do not re-filter the waveform data under any circumstances, for example, only display it "as is". Optional.
../parsedwaveforms@donotanalyze	If set to *True*, do not re-analyze the waveform data. Optional

PARSEDWAVEFORMS	
../parsedwaveforms@otherinfo	New string for future use to describe other modifications to the data. Optional.
UNPARSED WAVEFORMS	Same changes as *parsedwaveforms*
LEAD WAVEFORMS	
restingecgdata/waveforms/leadwaveforms	This section now unbounded (for future use). Will thus allow multiple groups of leadwaveforms, perhaps at different samplerates or bandwidths.
../waveforms/leadwaveforms@attributes	Now has the same attributes as "*parsedwaveforms*" (except "*durationperchannel*", which only occurs with each individual "*leadwaveform*" as "*duration*").
REPRESENTATIVE BEATS	
../waveforms/repbeats@compression	New string attribute to represent compression method, if repbeats are compressed. Optional.
../waveforms/repbeats@samplespersec	New "float" attribute to describe sample rate of rep beats. Required.
../waveforms/repbeats@resolution	New attribute (float) to describe resolution (LSB) of rep beats, in uV. Required.
../waveforms/repbeats@repbeatmethod	New string attribute to describe rep beat generation method (for example, Philips uses "mean", GE uses "median"). Optional.
Representative beat measurements	New representative beat measurement elements, replacing repbeat attributes. Now are the same as the "*globalmeasurements*" and use a parallel structure. They all have optional "*editedflag*" and "*uneditedvalue*" attributes, same as interpretation measurements. Durations are now in milliseconds (NOT samples!), and onsets are in milliseconds from start of rep beat waveform.
../repbeat/pdur	p-wave duration.
../repbeat/print	p-r interval.
../repbeat/qonset	q onset in millisec from start of repbeat waveform.
../repbeat/qrsdur	qrs duration.
../repbeat/tonset	t onset in msec from start of repbeat waveform. Optional.
../repbeat/qtint	q-t interval (raw, not corrected)
../waveforms/repbeats/annotations	New repbeat annotation elements to support future rep beat annotations. See definition of "annotations". Optional.

Representative beat waveforms	
../waveforms/repbeats/repbeat/waveform	New element to contain the rep beat waveform.
../waveforms/repbeats/repbeat/waveform@duration	Duration (of this rep beat waveform) attribute in millisec, for example, 2400. NOTE: 1.03 duration was in samples, not millisec.
ANNOTATIONS (new)	
restingecgdata/waveforms/annotations	New waveform annotation section (for future use). Can be used to represent any type of annotation on the waveform, either on an individual lead or globally. Optional.
../annotations/annotation	An individual annotation. The number of them is unbounded.
../annotations/annotation/leadname	Individual lead name. If omitted, annotation is global.
../annotations/annotation/label	The string label of the annotation.
../annotations/annotation/time	The time (in millisec) of the annotation.
../annotations/annotation/time@editedflag	Attribute flag. Set to *True* if the annotation time has been edited. Optional.
../annotations/annotation/time@uneditedvalue	Unedited value of the time. Optional.
TYPE DEFINITIONS	
samplingrate	Enumeration changed to "float" to support any type of future waveform.
signal resolution	Enumeration changed to "float" to support any type of future waveform.
signal bandwidth	Was, for example, "0.05-150". Now replaced with *hipass* and *lowpass*.
hipass	float
lowpass	positiveInteger
numberchannelsallocated	nonNegativeInteger
numberchannelsvalid	nonNegativeInteger
leadset	Replaced with *acquisitiontype* and *electrodeplacement*.

TYPE DEFINITIONS	
electrodeplacement	New list of electrode palacement locations
derivedleads	New list of leads which are mathematically derived using transformation coefficients
TYPES	
TYPEfiducial	A time point in the ECG (in millisec). Was limited to 11 seconds (for example, 11000). Now, no upper limit.
TYPEstarttime	A time point in the ECG (in millisec). Was limited to 11 seconds (for example, 11000). Now, no upper limit.
TYPEduration	A duration in the ECG (in millisec). Was limited to 11 seconds (for example, 11000). Now, no upper limit.
TYPEcount	Was limited to 500. Now no upper limit.
TYPEharmonicsetting	Was "100, 150". Now "100 150". (no comma, to be consistent with *xsd:list*)
TYPEharmonicsetting	Was "120, 180". Now "120 180". (no comma)
TYPEharmonicsetting	Enumeration now has "*Other*".
TYPErestingecgstatus	Enumeration now has "*Other*".
TYPEinterpretationformat	Enumeration now has "*Other*".
Complete list of criteria versions	
"01"	
"02"	
"03"	
"04"	
"05"	
"06"	
"07"	

Complete list of criteria versions	
"08"	
"09"	
"0A"	
"0B"	New
"0C"	New
"0D"	New
"0E"	New
"0F"	New
"10"	New
"11"	New
"12"	New
"13"	New
"14"	New
"15"	New
"16"	New
"17"	New
"18"	New
"19"	New
"1A"	New
"P2"	

Complete list of criteria versions	
"P3"	
"P4"	
"H0"	
"H8"	
"T0"	
"T8"	
"V8"	
"S9"	New
"None"	
"Unknown"	
"Custom"	
"Other"	New
Complete list of measurementversions	
"7"	
"8"	
"9"	New
"A"	New
"B"	New
"C"	New
"D"	New

Complete list of measurementversions	
"E"	New
"F"	New
"10"	New
"11"	New
"12"	New
"13"	New
"14"	New
"15"	New
"Custom"	
"Other Manufacturer"	New
"Other"	New
Complete list of lead labels	
"I"	
"II"	
"III"	
"aVR"	
"-aVR"	
"aVL"	
"aVF"	
"V1"	

Complete list of measurementversions	
"V2"	
"V3"	
"V4"	
"V5"	
"V6"	
"V7"	
"V8"	
"V9"	
"V2R"	New
"V3R"	
"V4R"	
"V5R"	New
"V6R"	New
"V7R"	New
"V8R"	New
"V9R"	New
C1 - C9, CxR, and CX1-CX4	All should be deleted. C1 - C9, CxR are all European IEC "electrode" labels. They are only used to label electrodes, NOT displayed waveform leads. (Left in for backwards compatibility.)
"C1"	
"C2"	
"C3"	

Complete list of measurementversions	
"C4"	
"C5"	
"C6"	
"C7"	
"C8"	
"C9"	
"C2R"	
"C3R"	
"C4R"	
"C5R"	
"C6R"	
"C7R"	
"C8R"	
"C9R"	
"CX1"	
"CX2"	
"CX3"	
"CX4"	
"Id"	New. "d" suffix signifies "derived".
"IId"	New

Complete list of measurementversions	
"IIId"	New
"aVRd"	New
"-aVRd"	New
"aVLd"	New
"aVFd"	New
"V1d"	New
"V2d"	New
"V3d"	New
"V4d"	New
"V5d"	New
"V6d"	New
"V7d"	New
"V8d"	New
"V9d"	New
"V2Rd"	New
"V3Rd"	New
"V4Rd"	New
"V5Rd"	New
"V6Rd"	New
"V7Rd"	New

Complete list of measurementversions	
"V8Rd"	New
"V9Rd"	New
"X"	
"Y"	
"Z"	
"Xd"	New
"Yd"	New
"Zd"	New
"VX1"	
"VX2"	
"VX3"	
"VX4"	
"A1"	New
"A2"	New
"A3"	New
"A4"	New
"USER1"	New
"USER2"	New
"USER3"	New
"CC5"	New (exercise)

Complete list of measurementversions	
"CM5"	New (exercise)
"CH"	New (exercise)
"ML"	New (exercise)
"LA"	New
"RA"	New
"LL"	New
"i"	New
"E"	New
"C"	New
"A"	New
"M"	New
"F"	New
"H"	New
"MaVR"	New
"MVR"	New
"S"	New
"AS"	New (EASI)
"ES"	New (EASI)
"IS"	New (EASI)
"V"	New (PMD)

Complete list of measurementversions	
"VM"	New
"MZ"	New
"MY"	New
"NEHB_D"	New (German)
"NEHB_A"	New
"NEHB_J"	New
"BP_X"	New
"BP_Y"	New
"BP_Z"	New
"ECG"	New (PMD)
"MCL"	New (PMD)
"MCL1"	New (PMD)
"PADS"	New (CRS)
"PADDLES"	New (CRS)
"PACE"	New (external pacing lead)
"RESP"	Respiration
"RESP-Imp"	Respiration from impedance
"RESP-ECG-derived"	Respiration derived from ECG muscle artifact
"RESP-ECG-derived-I"	Respiration derived from ECG lead I muscle artifact
"RESP-ECG-derived-II"	Respiration derived from ECG lead II muscle artifact

Complete list of measurementversions	
"RESP-ECG-derived-III"	Respiration derived from ECG lead III muscle artifact
"RESP-ECG-derived-aVR"	Respiration derived from ECG lead aVR muscle artifact
"RESP-ECG-derived-aVL"	Respiration derived from ECG lead aVL muscle artifact
"RESP-ECG-derived-aVF"	Respiration derived from ECG lead aVF muscle artifact
"RESP-ECG-derived-V1"	Respiration derived from ECG lead V1 muscle artifact
"RESP-ECG-derived-V2"	Respiration derived from ECG lead V2 muscle artifact
"RESP-ECG-derived-V3"	Respiration derived from ECG lead V3 muscle artifact
"RESP-ECG-derived-V4"	Respiration derived from ECG lead V4 muscle artifact
"RESP-ECG-derived-V5"	Respiration derived from ECG lead V5 muscle artifact
"RESP-ECG-derived-V6"	Respiration derived from ECG lead V6 muscle artifact
"PLETH"	Pleth waveforms
"?"	New (Unknown, or Other)
Complete list of machine names	
"Unknown"	
"HeartstartMRx"	
"IntelliVue"	
"CMS"	
"PageWriter"	
"PageWriter XL"	
"PageWriter Touch"	

Complete list of machine names	
"PageWriter Trim"	
"5600C System"	
"M1730 System"	
"M1729 System"	
"M3700 System"	
"Holter"	New
"Telemetry"	New
"Stress"	New
"Migrated from 5600C System"	
"Other Manufacturer System"	
"Other Manufacturer Device"	New
"Other Philips Cardiograph"	New
"Other Philips Defibrillator"	New
"Other Philips Monitor"	New
"Other"	New
Complete list of acquisition types	
"MIDA"	
"EASI"	
"3-WIRE"	New
"4-WIRE"	New

Complete list of acquisition types	
"5-WIRE"	New
"6-WIRE"	New
"7-WIRE"	New
"8-WIRE"	New
"9-WIRE"	New
"10-WIRE"	Use for current devices
"11-WIRE"	New
"12-WIRE"	New
"13-WIRE"	New
"14-WIRE"	New
"15-WIRE"	New
"16-WIRE"	New
"17-WIRE"	New
"18-WIRE"	New
"19-WIRE"	New
"20-WIRE"	New
"21-WIRE"	New
"22-WIRE"	New
"23-WIRE"	New
"24-WIRE"	New

Complete list of acquisition types	
"Other"	New
Complete list of electrodeplacement	New
"Unknown"	
"STD"	This means limb electrodes are on distal locations (wrist & ankles).
"STD 12+"	More than 12 leads.
"MASON-LIKAR"	This means limb electrodes are on torso locations
"MASON-LIKAR 12+"	This means limb electrodes are on torso locations
"MODIFIED"	Something other than Standard and other than M-L. NOTE: PMD uses "Modified" on Intellivue bedside 12-lead.
"MODIFIED 12+"	
"MIDA"	
"EASI"	
"EASI OFF STERNUM"	
"FRANK"	
"NEHB"	(German)
"Other"	
Complete list of report label	"*../reportinfo/reporttype*" was renamed to "*reportlabel*". This label SHOULD appear on the report, or at least should appear if other than "*STD 12 LEAD*".
"STD 12 LEAD"	
"STD 12+ LEAD"	
"MASON-LIKAR 12 LEAD"	
"MASON-LIKAR 12+ LEAD"	

Complete list of report label	
"MOD LEAD PLACEMENT"	
"STD PLACEMENT; SOME LEADS DERIVED"	
"MASON-LIKAR; SOME LEADS DERIVED"	
"MOD LEAD PLACEMENT; SOME LEADS DERIVED"	
"EASI DERIVED LEADS"	
"EASI (OFF STERNUM) DERIVED LEADS"	
"STD 12 LEAD; REP BEAT"	(PAN-12)
"STD 12+ LEAD; REP BEAT"	
"MASON-LIKAR 12 LEAD; REP BEAT"	
"MASON-LIKAR 12+ LEAD; REP BEAT"	
"MOD LEAD PLACEMENT; REP BEAT"	
"EASI DERIVED LEADS; REP BEAT"	
"EASI (OFF STERNUM) DERIVED LEADS; REP BEAT"	
"MIDA"	
"NEHB"	(German)
"Other"	
Deletions of "default="False"	
../reportformat@extendedmeasflag	Deleted default="*False*". If not present, assume "*False*".
../reportformat@printtruncationflag	Deleted default="*False*". If not present, assume "*False*".

Deletions of "default="False"	
../namedmeasurement/meas@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/pfrontaxis@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/i40frontaxis@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/t40frontaxis@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/qrsfrontaxis@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/stfrontaxis@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/phorizaxis@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/i40horizaxis@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/t40horizaxis@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/qrshorizaxis@editedflag	Deleted default="False". If not present, assume "*False*".
../interpretations/globalmeasurements/sthorizaxis@editedflag	Deleted default="False". If not present, assume "*False*".
modifiers@changed	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".
modifiers/modifier@changed	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".
scmodifiers@changed	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".
variables@changed	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".
numericvalue@changed	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".
codedstatement@deleted	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".
qualitystatement@deleted	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".
statement@editedflag	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".

Deletions of "default="False"	
listofECGlead@changed	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".
groupofECGlead@changed	Deleted default="False". Now explicitly optional. If not present, assume " *False* ".